Three Lectures

ON THE

GROWTH RATES OF THE BODY, AND ESPECIALLY OF THE LIMBS,

IN THEIR RELATION TO THE PROCESSES OF RECTIFICATION OF DEFORMITY.

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LECTURE I.

THE subjects to which I desire to draw attention in this and the following two lectures will be seen to be partly anthropometrical and partly surgical. This first one is purely introductory to the second and third, and consists chiefly of the consideration of certain facts as to the normal stature and growth rate of English-speaking people generally, either English or American, and more particularly as to how these show themselves in the early growing years; then, by classifying the social positions of those who are measured, to find out the variations which are apparently due partly to heredity and partly to the conditions under which the individual is born and brought up. The figures, then, of the general average must be corrected by the special averages made from growing children living different lives, receiving different food and care, and living with different environments.

Many classifications have been adopted, but the one I shall use is a short one, and will be comprehended in the following list: 1. Relative stature of male adolescents of different social classes, eleven to twelve years old. 2. Relative stature of male adults, twenty-five to thirty years old. 3. Average height at birth and growth rates of all classes of children aged from two to eight years (chiefly from industrial schools and artisans). 4. Growth of industrial school children, from two to eight years. 5. Growth of children of hospital patient class, from two to eight years. 6. Growth of children of the most favoured classes, from two to eight years.

The following abridged statistical tables will give the figures from which these facts are determined. They are taken partly from the report of the Anthropometrical Committee of the British Association,[1] partly from Bowditch's tables given in the reports of the State Board of Health of Massachusetts,[2] and partly from measurements made by myself. The value of such tables obviously depends largely upon the number of observations, and the greater that number is, the less will be the disturbance of unusual figures, so that the arithmetical mean and the true average will approximate one to the other.

There are, however, many sources of error, and some of them can be hardly corrected or avoided. Thus, children's growth often pursues a non-uniform course—i.e., in the course of a year we may discover quite irregular periods of active increase, followed by times of partial arrest. These seem sometimes to be connected with the season, spring and summer appearing most favourable for growth; but the explanation can far more often be found in the general conditions of life which are imposed on the children. Any acute illness is apt to be followed by a period of arrested nutrition, which in quite young children may result in a permanent loss of stature, but which, if it occurs after about the fourth year, is often followed by a period of somewhat extravagant growth. The most important differences, however, will be found in the normal rates of growth, and in the stature ultimately attained in the different classes of our population. In illustration of this point, I may call attention to Table I., which gives the relative stature of boys brought up under different social conditions, when they have attained to adolescence—i.e., are between their eleventh and twelfth years; and to Table II., which gives the relative stature of adult males of different social classes in the twenty-fifth to the thirtieth years. Coming now to the question of the stature and growth rate of children of earlier years, say from the second to the eighth, we find the same differences existing as results of social condition, or we may rather say that the variations are more marked.

Table III. appears at first sight to give the average stature of children of both sexes and of all classes at birth, and of their growth from two to eight years; but examination of the sources of the statistics will show that for the early years they are both scanty in number and are derived almost entirely from the artisan and industrial school classes. This table may be taken as giving a fairly accurate idea of the general growth rate of infants and children belonging to what are commonly called the lower middle and lower classes; but inasmuch as the average of the industrial school element must certainly reduce the whole average, while there is no balancing advantage from the higher stature of children brought up under more favourable circumstances, who are practically omitted, it is probable that the figures are rather low.

It is therefore worth while to supplement Table III. with others giving similar information in cases taken in the respective classes of industrial school children (Table IV.), of children of the classes which attend hospitals near London (Table V.), and, lastly, of children brought up under the most favourable conditions (Table VI.).

TABLE I.—*Relative Stature of Boys of different social classes in the 11th and 12th years.*

	No. of Obs.	Height.
Mean height of all classes	2862	52·6 inches
Of boys in public schools	150	54·98 ,,
Of agricultural labourers' children	304	53·01 ,,
Of artisan children (town)	181	52·6 ,,
Of boys in industrial schools ..	66	50·02 ,,

TABLE II.—*Relative Height of Adult Males of different social classes from the 25th to the 30th year.*

	No. of Obs.	Height.
Mean height of all classes	1935	67·5 inches
Professional classes	107	69·0 ,,
Labouring classes	945	67·5 ,,
Factory workers, tailors, &c.	193	65·5 ,,

TABLE III.—*Average Height and Growth Rate of all classes, chiefly industrial and artisan.*

Obs.	Age.	Sex.	Measurement.	Increase in inches.
451	At birth	Male .. 1 ft. 7·5 in.		—
		Female.. 1 ,, 7·3 ,, ...		—
5	At 2 years	Male .. 2 ,, 9·7 ,, ...		14·2
		Female.. 2 ,, 8·3 ,, ...		13·0
33	At 3 years	Male .. 3 ,, 0·8 ,, ...		3·1
		Female.. 3 ,, 0·0 ,, ...		3·7
107	At 4 years	Male .. 3 ,, 2·4 ,, ...		1·6
		Female.. 3 ,, 2·1 ,, ...		2·1
201	At 5 years	Male .. 3 ,, 5·0 ,, ...		2·6
		Female.. 3 ,, 4·8 ,, ...		2·7
266	At 6 years	Male .. 3 ,, 8·0 ,, ...		3·0
		Female.. 3 ,, 6·6 ,, ...		1·8
307	At 7 years	Male .. 3 ,, 9·9 ,, ...		1·9
		Female.. 3 ,, 8·4 ,, ...		1·8
1524	At 8 years	Male .. 3 ,, 11·0 ,, ...		1·1
		Female.. 3 ,, 10·6 ,, ...		2·2

Total increase of stature from 2 to 8 years, 14·3 in.—male, 28·5 in., female, 28·3 in.

TABLE IV.—*Industrial Schools.*

Obs.	Age.	Sex.	Measurement.	Increase in inches.
11 ..	2 ..	Male .. 0 ft. — ..	—	
		Female .. 2 ,, 7·95 in. ..	From birth 12	
15 ..	3 ..	Male .. 2 ,, 10·50 ,, ..	—	
		Female .. 2 ,, 11·50 ,, ..	3·4	
28 ..	4 ..	Male .. 3 ,, 0·27 ,, ..	1·8	
		Female .. 3 ,, 1·07 ,, ..	1·5	
80 ..	5 ..	Male .. 3 ,, 2·63 ,, ..	2·4	
		Female .. 3 ,, 3·22 ,, ..	2·2	
92 ..	6 ..	Male .. 3 ,, 5·14 ,, ..	2·5	
		Female .. 3 ,, 5·15 ,, ..	1·9	
109 ..	7 ..	Male .. 3 ,, 7·54 ,, ..	2·4	
		Female .. 3 ,, 6·38 ,, ..	1·2	
135 ..	8 ..	Male .. 3 ,, 8·61 ,, ..	1·1	
		Female .. 3 ,, 8·68 ,, ..	2·3	

Increase in stature from 2 to 8 years—Males, 13·4 in.; females, 12·6 in.

Table V. is derived from children taken indiscriminately from the classes which come to the hospitals to which I belong, and who came either with some local complaint

[1] See Anthropometry, Manual, and Report of Anthropometrical Committee of British Association. (Churchill, 1878.)

[2] Eighth Annual Report. (Boston, U.S., 1877.)

which could not be supposed to affect the growth rate, or which had nothing the matter with them, being brought by their parents or relatives (themselves patients) at my request. I had expected that these figures would work out below the general average, and I was somewhat surprised to find that the average stature is here not very notably different from that of the most favoured class. In any case, I think that the comparison of the statures, as shown in Tables V. and VI., is a just one as between the children of the well-to-do class and of the miscellaneous class which come to the hospitals in the west-end of London, and who chiefly live there or in the suburbs adjoining. No doubt the results would be different in other parts of London.

TABLE V.—*Heights, with Growth Rate, of 54 Children (hospital patient class), without any ailment diminishing stature.*

Obs.	Age.	Measurement.	Increase.
6	2 years	2 ft. 10·0 in.	—
9	3 „	3 „ 1·8 „	3·8
10	4 „	3 „ 3·9 „	2·1
7	5 „	3 „ 5·8 „	2·9
7	6 „	3 „ 7·0 „	1·2
9	7 „	3 „ 10·2 „	3·2
6	8 „	3 „ 11·4 „	1·2

Making increase in stature from 2 to 8 years, 14·4 in.

TABLE VI.—*Height and Growth Rate of 62 Children of the most favoured classes.*

Obs.	Age.	Measurement.	Increase in inches.
8	2 years	2 ft. 10·6 in.	—
9	3 „	3 „ 2·3 „	4·7
7	4 „	3 „ 4·8 „	2·5
12	5 „	3 „ 6·9 „	2·1
14	6 „	3 „ 8·2 „	1·3
6	7 „	3 „ 11·3 „	3·1
6	8 „	4 „ 1·5 „	2·2

Making increase in stature from 2 to 8 years, 16·9 in.

With regard to the length of children's bodies at birth, evidence is not easy to collect, but I have strong reasons for believing that among the artisan class and the classes socially above them the stature of new-born babies is a good deal higher than the tables give. This will be seen from Table III. to be under 20 inches, but I find that 24 inches is not uncommon, and 23 and 22 inches are quite ordinary measurements. It is a fair conclusion that children of the classes which furnish the patients to the western London hospitals are not different in their growth and stature and general development from the children of the fairly well-to-do lower middle class with whom they live, and that it would be an error to place their position as low as the pauper class or the class which fills the industrial schools. If this be allowed, the following general rules for the growth of these healthy children of the fairly well-to-do and the well-to-do may be accepted. They are largely the outcome of figures derived from Bowditch's tables,[3] but inasmuch as the numbers of observations which he records in respect of growth in the early years of life—say from the first to the fifth or sixth years—I have supplemented his table by measurements taken by myself.

As a general statement, it appears that the most rapid increase in stature takes place during the first five years of life, not only relatively but absolutely, and that this growth is not notably different in the two sexes; that for the next four or five years boys grow faster than girls; that girls from twelve to fourteen are usually taller and grow faster than boys at that age, but that this advantage ceases upon the establishment of complete puberty, which is usually about two years later in the male, so that by the sixteenth year the male has generally caught up and passed the female. This must, in all probability, be explained, as Bowditch suggests, as being the effect of an antagonism between the processes of growth and the development of the capacity for reproduction. During the whole period of growth the lower extremities increase in length to five times their original measurement, the trunk trebles it, and the head and neck doubles it. The total yearly average is so irregular that for any given case it may be very misleading. Speaking generally, the period of greatest increase is in the first year, when it should be about 7½ in.; in the second year about 4 in.; and from that time the growth rate gradually declines until about the twelfth year, when it is about 1½ in. a year. The thigh grows more than the leg, and the arm more than the forearm. It is clear, however, that with regard to future stature the growth of the lower extremities, and of the trunk to a less extent, must be by far the most important factor. As to the former, by the end of the third year the lower extremities have already doubled their original length; it is not until the twelfth year that they quadruple it, and all the rest of their time of growth is required for the quintuple increase to be completed.

It is often stated that the rule of increase of stature in the first years of life is that during the third year the child attains to one-half its adult stature, and this is probably correct enough for males; and it has been very justly observed that in women, whose average adult stature is about 4 in. under that of men, owe that defect to their ceasing to grow two years earlier than men do, rather than to any greatly lower rate of continuous growth. It is therefore upon the growth-rate of the legs and thighs in early life—say, up to the sixth year—that the ultimate stature will chiefly depend; and, further, if it is wished to compare the limb growth in cases of developing deformity with the normal growth rates at the same age, the normal increase should be ascertained at shorter intervals than year by year. It is very difficult, however, to observe or record fine differences on the limbs of infants, and in my own experience all attempts at measurement of the limbs at all during the first year, at short intervals, have failed, even the mere length of the body being often very difficult to ascertain. During the second year it is possible, but still very difficult to get measurements, at intervals of a month, of the growth of the thighs and legs, as shown in Table VII., but both in this and in the third year two months' interval is about the smallest at which one can work with any confidence, and after that age measurements made every three months will give sufficient information. For the reasons I have just stated I did not continue monthly measurements for more than 14 infants.

TABLE VII.—*Average Growth of Legs and Thighs in 14 Children at monthly intervals, during second year of age.*

Age.	Increase from last measurement. Thigh	Leg.
13 months	0·15 inch	0·14 inch
14 „	0·14 „	0·12 „
15 „	0·13 „	0·11 „
16 „	0·13 „	0·12 „
17 „	0·12 „	0·10 „
18 „	0·10 „	0·09 „
19 „	0·12 „	0·09 „
20 „	0·12 „	0·10 „
21 „	0·10 „	0·08 „
22 „	0·10 „	0·08 „
23 „	0·10 „	0·09 „
24 „	0·10 „	0·06 „
Totals	1·40 inch	1·20 inch

TABLE VIII.—*Showing increase at bi-monthly periods of the Lower Limbs of 21 Healthy Children in their second year.*

Measurement at starting having been made, the mean increase at the end of	Thigh.	Leg.
2nd month of 2nd year was	0·30 inch	0·24 inch
4th „ „	0·25 „	0·23 „
6th „ „	0·22 „	0·18 „
8th „ „	0·22 „	0·19 „
10th „ „	0·19 „	0·16 „
12th „ „	0·20 „	0·17 „
Totals	1·19 inch	1·17 inch

Total increase of lower limbs in 2nd year 2·36 inches. Average length of lower limb at commencement of 2nd year 12½ inches.

TABLE IX.—*Showing increase at bi-monthly periods of the Lower Limbs of 17 Healthy Children in their third year.*

Measurement at starting having been made, the mean increase at the end of	Thigh.	Leg.
2nd month of 3rd year was	0·19 inch	0·18 inch
4th „ „	0·18 „	0·17 „
6th „ „	0·18 „	0·18 „
8th „ „	0·17 „	0·16 „
10th „	0·1 „	0·14 „
12th „ „	0·15 „	0·15 „
Totals	1·01 inch	0·98 inch

Total increase of lower limbs in 3rd year 1·99 inch.

[3] Op. cit.

Tables VIII. and IX. give the results of measuring the legs and thighs of 21 children in their second year and 17 children in their third year, at bi-monthly periods; while from Tables IV., V., and VI., already alluded to, the slower rate of growth of children from their fourth to their eighth year in annual increment may be estimated. The general conclusions as to the growth rate of the lower extremities in children from their second to their eighth year may then be summarised thus in terms of monthly growth. The thighs grow at the beginning of the second year at the rate of a little more than $\frac{1}{4}$in., and the legs a little less than $\frac{1}{4}$in. per month. This gradually diminishes until at the end of the year the rate has sunk to $\frac{1}{12}$in. and a little more than $\frac{1}{12}$in. respectively. During the third year it is a little more and a little less than $\frac{1}{12}$in., and so on in diminishing rates until the eighth year, when the monthly rates have sunk to about $\frac{1}{20}$in. and $\frac{1}{20}$in. respectively.

It is here necessary to mention the way in which my own measurements (such as those given in Tables V. and VI., and others) were obtained. I found that any attempt to measure from bony point to bony point on the limbs of infants and children is not possible except in a very coarse fashion, noting only large differences. Temporary marks on the skin over the points of measurement can no doubt be accurately measured from, but they would have to be exactly reproduced on every occasion—a thing which in consequence of the indefinite nature of the anatomical landmarks, the amount of loose fat, and other natural difficulties, will not be found to be feasible. But it is, I think, a fair assumption that the increase of the distance between more permanent marks on the skin immediately overlying the bony prominences which are used as landmarks may be taken as giving an accurate measure of the growth of the subjacent bone. That the growth in area of the skin and soft tissues goes on *pari passu* with that of the bones is indicated, or indeed proved, by the observation that a permanent skin mark over a bony landmark will remain in the same relative position to it for some years. A very fine tattoo mark made with the end of a grooved needle, $\frac{1}{4}$in. long, and charged with Indian ink, will last as a fine black dot for something more than a year, getting gradually fainter.

These dots can be exactly renewed, and if they are made immediately over the bony landmarks we have secured the first essential for accurate measurement. But there are other precautions which are also required if comparative observations are to be trustworthy. They must be taken with a similar position of the lower limbs and pelvis on each occasion, and I believe the following plan will be found the best for securing this—I mean by employing such a "measuring board," as it may be termed, as the one I have brought here. It consists of a piece of deal, 3 ft. by 2 ft., battened to prevent warping, and varnished for the sake of cleanliness. Under the varnish, lines should be drawn with a deep black pencil, so as to divide the board into 2 in. squares in the manner of a chess-board; while round the sides, also beneath the varnish, run measuring tapes. It is obvious that by placing the child on the board whenever the legs are to be measured, so that the iliac spines are over the same horizonal line, and that the limbs lie straight on either side of a vertical one from the fork to between the malleoli, the measurement is made with the limbs in the same position on each occasion. In measurements of small increments it is essential, as Roberts has observed, that the observation should be made with a plain tape, or, at any rate, that the side exposed to the observer's view should not be graduated, otherwise it is difficult to avoid the tyranny of a preconceived idea of what a measurement should give. The measure I have chiefly used is a specially made tape one, blank on one side, and graduated into tenths.

From these statistics I believe that a trustworthy standard of normal growth in early years may be established. It is plain that such a standard is an essential preliminary condition to any investigation of the effects of bone growth, normal or abnormal. Before we leave the subject of the rates of bone growth of the limbs under different ages and conditions, there is another feature which is worth considering—namely, the part which the diaphysis plays in the production of the normal increase of length of the whole bone. That there must be some interstitial growth in length as well as in diameter of the diaphysis of the long bones appears to be generally allowed, but its amount is considered to be insignificant in comparison to the much more rapid increase in the neighbourhood of the epiphysial cartilages. But when we watch the processes of deformity by curvature, and still more of recovery from it, the details of which are described later, a doubt arises whether alterations of the growth rate of the long bones at the epiphyses alone can be efficient either to produce in the first place or rectify later the alterations in shape which we see going on. The curvatures due to such a deforming disease as rickets affect, in the great majority of cases, the diaphyses of the bones only, although the epiphysial nutritive disturbance will diminish the total length of the limb when recovery takes place; to all appearance it does so in consequence of a diminution of the sharpness of the curves throughout the whole extent of the shaft, their opening out in this way being partly due to interstitial growth, although the increase of length by the growth at the epiphysis is a more important factor in the restoration of shapeliness to the bone. It is not at all clear, however, how this question can be investigated in developing human limbs, but I have endeavoured in the past few months to find out in the case of young dogs whether the diaphysis of their long bones, already ossified, underwent any further growth in length which could be recognised as being a process apart from the growth at the epiphysis.

An attempt was made to ascertain this by a simple operation upon three half-grown dogs of nearly the same weight and size, and believed to be all about four months old. Events showed, however, that one was older and was hardly growing at all. After they had been fed up for about ten days, in each case the animal was anæsthetised and held in a dog-holder. Then the length of one of the forearms or one of the thighs was measured externally, and this apparent length was recorded as being the outside length of the whole limb. Two incisions were then made over the proximal and the distal ends of the shaft, about three-quarters of an inch away from the joint, and not encroaching on the epiphysis of the radius in two cases, and of the femur in a third animal. The incisions were made down to the bone, off which the divided periosteum was peeled to allow a small saw cut to be made across the bone itself. Into the nick thus formed a little Indian ink was inserted. The wounds were closed and dressed, the whole operation being aseptic. In every case the wounds healed straight away and were not resented in the least. There was no sign of periostitis or disturbance of health, and no suppuration. The exact distance between the distal and proximal markings were taken by compass points and recorded at the time. The dogs were then kept under healthy conditions and very well fed for ten weeks, when they were killed and the bones of the limbs operated on were examined. The general growth of the limb operated on was first noted from the time of operation until the animal was killed, and then the bones were cut down upon and the seat of the markings upon the diaphysial shafts were examined, and the distances between these markings were compared with those by which the marks were separated at the time of their marking. The results may be tabulated as follows:—

Experiment 1 (Feb. 7th).—Fox terrier bitch; age three and a half months; weight 8½ lb.; skin surface length of thigh from tip of great trochanter to knee, 3·10 in.; distance between cross incisions in femoral shaft, 2 in. At the end of ten weeks; Length of thigh at same points as before, 3·60 in.; distance between incision marks, 2·10 in.; weight 9½ lb.

Experiment 2 (Feb. 7th).—Fox terrier bitch; age three months; weight, 7 lb.; length of superficial forearm from tip of olecranon to pisiform bone, 4·30 in.; distance of cross incisions in radial diaphysis, 2·15 in. After ten weeks: Length of forearm as before, 4·60 in.; distance of cross incisions, nearly 2·30 in.; weight, nearly 8 lb.

Experiment 3.—Half-bred pug dog; reputed age, three months; weight, 7¾ lb.; length of right forearm from olecranon to pisiform bone, taken on skin surface, 4·30 in.; distance between cross incisions in shaft of radius diaphysis, 2·25 in. After ten weeks: Total length of forearm taken as before, 4·50 in.; distance between incision marks in diaphysis, 2·30 in.; weight, 8 lb.

Soon after the dog in Experiment 3 had been operated on, it became apparent that it was not growing like the others, and it was recognised as being older than it had been stated to be. As will be seen from the report, it had only increased ¼ lb. in weight. The forearm had hardly increased in length, while the increase in the distance of the incision marks on the radius was only ·05 in. Further

inspection of the bones showed that the animal was nearly adult. The general growth of the other thigh in the first dog, and of the opposite forearm in the other two, was found to correspond with the limbs operated on.

Although there were only three animals operated on, the results obtained were consistent. From the measurements just given, it appears that in the limbs of half-grown dogs of the terrier type the total increase in the length of the long bones may be estimated at about one-tenth of their whole length in three months. A forearm, for example, of 5 in., would be 5½ in. at the end of that time. Further, of that growth by far the larger part was due to, and took place at the epiphyses. This might be taken at quite four-fifths of the whole increase, but there was also a demonstrable growth going on throughout the length of the shaft, which, in the case of the limb supposed, would in three months amount to $\frac{1}{10}$ in., or one-fifth of the total increase, the remaining four-fifths taking place at the epiphyses.

If it is permissible to form any opinions as to human growth of bone from that which is found in the dog, it would seem that it is reasonable to recognise that the essential increase of the diaphysis in young bones may well be of importance as affecting the processes by which deformities are produced or rectified. I have these bones here for inspection, and have marked on the card the exact distances between the incision marks at the time they were made. The increase in the bones can readily be seen, but not nearly so well as when they were quite fresh, for the Indian ink then still stained the immediate area of operation, and there was a little callous thickening of periosteum at the incision, which has hardly survived the maceration.

CASE OF RENAL CALCULUS.

NEPHRECTOMY PERFORMED BY MR. BARWELL NINE YEARS AGO; IMPACTION OF CALCULUS IN URETER OF THE OTHER KIDNEY, FOLLOWED BY NON-OBSTRUCTIVE JAUNDICE AND DEATH.

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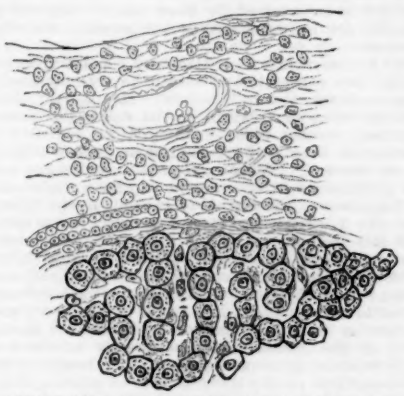
D. F——, aged twenty-six, was admitted into Charing-cross Hospital on March 28th, 1890, under the care of Dr. Green. He stated that his left kidney had been removed by Mr. Barwell on May 1st, 1881, and I find the following among the abstracts of the communications made to the International Medical Congress of that year: "*Nephrectomy for nephrolithiasis*, by R. Barwell, F.R.C.S.—Dennis F., aged 18, was under my care in October, 1880, with a left lumbar abscess, diagnosed as perinephritic, probably depending on calculus. The abscess was widely opened. He improved in health. No leave for further measures was obtained. He was discharged in January, 1881, but kept under observation. On March 29th, 1881, the lad was readmitted, having suffered more and lost flesh considerably. His temperature was very hectic. In April I sounded through the persistent sinus and detected a stone. On May 5th leave for further procedure was obtained. The difficulties foreseen were from proximity of the twelfth rib to the crest of the ilium, and from the amount of dense cicatricial tissue." Mr. Barwell then describes the operation by which he successfully removed the organ. "June 22nd: The boy is well in health. Has gained flesh; temperature normal. Only a minute wound appears." Since the summer of 1881, up to March 21st, 1890, when the present illness commenced, he has been in good health and followed the occupation of book-edge gilder.

Present Illness.—On March 22nd, a week previously to admission, the man was seized with severe vomiting great pain at the epigastrium, and "feeling of illness and feverishness," which obliged him to take to his bed. On March 24th he came to the out-patient department complaining of great pain in the right side. He was seen by Dr. Frederick Willcocks, who examined the urine and found pus and albumen. He suggested that there was probably a stone in the other kidney, and told him if he became worse to come at once to the hospital. On the 27th the patient noticed a lump in the right loin, which did not give him much pain, but was tender on pressure. The vomiting still continued, and jaundice and epistaxis came on. He came to the hospital the next day, and was admitted. On the 28th the following notes were taken:—Patient is a well-nourished man, and presents an anxious, feverish appearance. He is jaundiced and breathing rapidly, the alæ nasi working. Respiration 44. There are no adventitious sounds in the chest. Pulse 100; not much tension. The apex beat is in the fifth space, nipple line, not diffused, and rather weak in character. Heart sounds normal. The tongue is red and dry. The patient has no appetite, and complains of great thirst. The temperature at night rose to 102·6°. There is a slight prominence in the right lumbar region, extending up into the right hypochondriac region; it is dull on percussion except in front, where colon resonance could be determined. The urine contains traces of albumen and pus; it is tinged with bile; only about half an ounce has been passed since admission. Vomiting still persists. Three stools have been evacuated containing bile.—March 30th: Vomiting and hiccough still continue. He has passed 453 cc. of alkaline urine, containing bile, blood, and pus; sp. gr. 1012, maximum temperature 100·6°.—31st: The patient had a very bad night, being kept awake by hiccough and pain in the abdomen, commencing in the right flank and extending towards the epigastrium. The sickness still continues. He has passed 490 cc. of alkaline urine, containing blood, pus, and bile; maximum temperature 101·6°; preceded by a rigor. He has vomited some black, inky-looking fluid. His bowels have acted, the motions being tarry. The vomiting and hiccoughing continued during the night.—April 1st: To-day he has been spitting bright-red blood, which is neutral in reaction and not aerated. Nearly the whole surface of the body is covered with a bright-red rash, which is in distinct spots and patches raised above the surface, and disappears on pressure. The patient says he feels much worse, pain in the abdomen being chiefly complained of. Urine dark, alkaline; sp. gr. 1012; contains 1·6 per cent. of urea; blood, albumen, pus, and bile are present; quantity, 249 cc.; maximum temperature 97·6°.—2nd: Patient passed a bad night, being kept awake by the pain and hiccough. He has passed another tarry motion. His abdomen is more tense and rigid. The black vomit still continues. The rash is more marked, the spots having run into one another. There is no œdema. Temperature 96·4°. Mr. Boyd was called in by Dr. Green to see the case. Hitherto only palliative treatment for non-obstructive jaundice had been adopted. As he was passing a not inconsiderable quantity of urine containing 1·4 per cent. of urea, and as there was a difference of opinion as to the primary cause of the symptoms, no operation was resorted to. In the evening he was seized with severe dyspnœa, and died quite suddenly before any remedies could be administered. He retained his intellectual faculties to the last, and muscular twitchings were not noticed.

Necropsy (made by Mr. Harold fourteen hours after death).—Body well nourished; skin jaundiced, and covered with the urticarial eruption. Heart: Weight 11 oz.; nothing abnormal. Lungs: Nothing abnormal beyond an old pleuritic adhesion of the left. On opening the abdomen, the right kidney was found adherent to several coils of intestine. The pelvis was not dilated; but on removal of the intestines and stomach, and dissecting out the ureter, a stone could be felt in it about an inch and a half beyond the pelvis. The organ was then removed; it weighed 1 lb. 5 oz., and was greatly hypertrophied. The capsule stripped easily. On slitting up the ureter, a small uric-acid calculus of an irregular shape, measuring ⅜ in. long by ¼ in. transverse diameter, was found impacted in the ureter an inch and a half from the hilus. The pelvis was not much dilated; it held barely half an ounce of water; the calyces were very slightly dilated, and loose in one of them was a small uric-acid calculus. The cortex measured from ½ in. to ¾ in., and the pyramids 1 in. to 1½ in. The medullary substance was red and of fairly good colour. The cortex was pale, and exhibited much yellowish mottling. There was no trace of the left kidney, but there was some cicatricial tissue in the lumbar region. Liver: Weight 4 lb. 5 oz. Its substance was of a pale yellowish-green colour, and was fairly firm; on section the bile-ducts were empty, and did not appear dilated. The gall-bladder only contained a little greyish white grumous fluid. There was no evidence of obstruction in the bile-ducts. The stomach and intestines showed no ulceration or erosion. 100 cc. of the blood was

taken, and placed in 200 cc. of rectified spirit to coagulate the proteids; 90 cc. of this mixture was evaporated to dryness over a water-bath, and the residue boiled with water (filtered) to extract the nitrogenous crystalline substances. The filtrate represented the crystalline nitrogenous substances in 30 cc. of blood. This was evaporated to 5 cc., and the amount of nitrogen estimated by the hypobromite-of-soda method in a Dupré's apparatus; 2·4 per cent. was read off, but inasmuch as the 30 cc. had been reduced to 5 cc. this must be divided by 6, and thus we obtain 0·4 per cent. of nitrogenous crystalline extractives in the blood. Another analysis was made, but instead of dissolving out the crystalline nitrogenous extractives with water absolute alcohol was used. Kreatin is almost insoluble in absolute alcohol; urea is very soluble. The alcoholic extract of the dried residue of a similar quantity of blood yielded 3 per cent. For the most part this would be urea, although some of the alcoholic extract, placed upon a slide and examined microscopically, showed numbers of tyrosin crystals; moreover, on addition of mercuric nitrate and nitric acid a faint red colouration was obtained, showing the presence of this body in traces. Portions of the liver and kidney were hardened in absolute alcohol, also in 2 per cent. bichromate of ammonia solution. Microscopical examination of sections of the kidney stained with methylene blue showed colonies of micrococci taking the form of cylinders in the uriniferous tubules and a general diffuse suppurative nephritis. Sections of the liver showed an acute inflammation of the portal canal, both small and medium-sized, the branches of the portal veins being blocked with blood-corpuscles undergoing disintegration. (Vide woodcut.) No leucin or tyrosin crystals were



Section of liver showing small portion of portal canal. Magnified 300 diameters.

found in the liver section, but they were obtained in abundance from an aqueous extract of the organ.

The points of interest in this case are the following: 1. The hypertrophy of the kidney, for, although the enormous weight of 1 lb. 5 oz. could be partly accounted for by the morbid condition, still it is highly probable that the organ had greatly increased in size as a compensation for the loss of the left kidney nine years previously. 2. The occurrence of urticaria is also of interest. I can only find one authority[1] who has described this condition as occurring in jaundice; he met with a number of cases. 3. Non-obstructive jaundice as a result of the impaction of a renal calculus must be extremely rare, for I can find no recorded case. Five days after the onset of symptoms jaundice came on, followed by black vomit, melæna, pyrexia, and rigors. At first I was inclined to attribute this to a toxæmia due to the retention of nitrogenous waste products, but the fact that Sir William Roberts does not mention this as a complication and the presence of micrococci in the kidney in great numbers made me conclude that the non-obstructive jaundice was due to a pyæmic condition of the blood setting up pylephlebitis. Although the patient had an enormous excess of nitrogenous waste matter in the blood, it is probable that he died from a combination of causes, the principle of which were septic toxæmia and the non-elimination of nitrogenous waste products.

[1] Graves' Clinical Medicine.

ON THE TREATMENT OF TUBERCULAR DISEASE OF JOINTS.

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IN THE LANCET of Feb. 8th Mr. Croft published a lecture on the present stage of the treatment of tubercular disease of the joints, in which he enters upon a criticism of the figures and conclusions contained in the lectures I delivered last year at the College of Surgeons. In some parts of his remarks Mr. Croft, if his words are to be taken literally, travels a long way in the direction of indicating that my statements are not justified by the evidence which I produced. As I am sure, however, that he has not consciously gone beyond fair and friendly discussion, I shall keep to the facts of the case so far as I know them, and shall pass by expressions which I think it would have been better to recast.

The best treatment of surgical tuberculosis is obviously a subject of great interest and importance. Mr. Croft and Mr. Barker, to whom Mr. Croft frequently refers, hold that tubercular disease of the joints should be treated by early excision—that is, according to the former, "as soon as pus is known to be present, even if the surgeon is uncertain as to the condition of the bones"; according to the latter, "as soon as caseation is even suspected." And, further, that the operation should go wide of the disease. Mr. Croft states that "the facts on which the operationist party base their policy are something like these: that when tubercular disease commences in joint structures, it follows the same course as it does in other structures of the body; that it may cease to develop, and then undergo spontaneous cure; that it may develop and undergo caseous degeneration, and the caseous products may liquefy and give rise to abscess; that the local condition may be followed by infection of the other parts of the body; that the tubercular element is artificially inoculable and is auto-inoculable, and this latter kind of infection may take place upon a long period of local quiescence." These facts call for a little close examination before they can be regarded as establishing the practice of early and free excision.

When we are told that in the joints, as in other structures of the body, tubercular disease may undergo either spontaneous cure or lead to caseation and abscess, it becomes a crucial question in what proportion of cases these two results respectively occur. This question, however, Mr. Croft entirely ignores. Whether the proportion is as one to two or three, or as one to thirty or forty, or whether it can be influenced by treatment, he does not say. Nor does he give us any information as to the course which tuberculosis takes in other structures of the body—how often the disease ends in recovery, or how often it leads to destructive changes that cannot be arrested by any means short of complete removal of the affected structures by operative interference. Nor does he produce any evidence to show in what proportion of cases the local condition is followed by infection of other parts of the body. But it is obviously important to know whether general infection occurs frequently or rarely—once in every three or four cases, or once in every twenty or thirty. Then, what inference is to be drawn in regard to treatment from the fact that "the tubercular element is artificially inoculable"? The fact that a disease can be communicated by inoculation affords no measure of its dangers. Inoculation is the most direct method known for ensuring contagion; but many diseases which are much more contagious than tuberculosis are wholly unimportant. Further, to state that tuberculosis is auto-inoculable is but to repeat, in other words, what Mr. Croft has already said—namely, that the local conditions may lead to infection of other parts, and it remains to ask, as before, in what proportion of cases this general infection occurs? Thus it will be seen that Mr. Croft advances as the grounds for early excision six propositions, which are either truisms in pathology or mere open possibilities of which he does not attempt any definite estimate. In the lectures which Mr. Croft is criticising I expressed the opinion that tuberculosis of the joints is much less formidable and intractable than many have supposed, and that if treatment by rest and its accessories is adopted early, and is adequately carried out,

early excision is uncalled for. To establish this position, I examined tuberculosis in its various aspects as fully as time would permit, and advanced evidence under the various heads of the inquiry. The points which I discussed included all the propositions on which Mr. Croft depends, and I stated the conclusions at which I had arrived. I will review these conclusions in the fewest words possible. Respecting the natural history of tuberculosis, I pointed out that the bacillus is largely dependent on fitness of soil, and I endeavoured to show that when this condition is no longer present the bacillus dies and the tubercular process comes to an end. As influencing fitness of soil, I mentioned, among other factors, (*a*) inheritance—regarding which I remarked that its effect is often over-estimated, for frequently children coming of a highly tubercular stock make a perfectly favourable and permanent recovery from tubercular disease when the requisite treatment is employed; (*b*) I pointed out that a large majority of all cases of tubercular disease of the spine, joints, cancellous bone, and lymphatic glands begin between the third and the eighth year, and that, as a very general rule, the active period of these affections, or, in other words, the period of fitness of soil, is limited in duration—i.e., is transitory,—so that many children who are the subjects of severe surgical tuberculosis between the ages of three and nine, afterwards completely recover and remain free from any further development of the disease. To illustrate the predisposing influence of (*c*) inflammatory action, I alluded to the occurrence of phthisis after prolonged pulmonary catarrh, and of tubercular disease of the epididymis after gonorrhœal inflammation, and remarked on the fact that the tubercular process advances while inflammatory action is in progress, and recedes when inflammatory action is arrested. I continued: "I have dwelt on the question of fitness of soil for the purpose of showing that it is a matter which has an important bearing on the development and course of tuberculosis. When we look into its life-history we find that the bacillus tuberculosis is dependent for its vitality and maintenance upon conditions and influences which are either in their nature transitory, or such as can be counteracted or removed, and that when these conditions are no longer present the bacillus perishes and the tubercular process comes to an end. When this point is reached, tubercle becomes a mere *corpus mortuum*, and either is gradually removed by disintegration and absorption, or gives rise, as any other 'sequestrum' might, to an abscess, with the evacuation of which it is swept clean away. When this clearance has been effected, the structures concerned, relieved of the parasitic element, are left free to undergo repair." As bearing on these conclusions—(*a*) that the tubercle bacillus is largely dependent on fitness of soil; (*b*) that the period during which the fitness of soil exists is transitory; (*c*) that the process is frequently arrested, and the necrosed tubercle completely removed—I alluded to those numerous instances in which the scars of bygone tubercular disease of lymphatic glands and of the lungs are found in the post-mortem room; and to the views now held by physicians as to the frequency with which patients recover from tubercular phthisis, and I quoted a recent paper by Dr. Sansom, who, after giving an analysis of twenty cases in which he was satisfied that phthisis had been arrested, expressed the opinion that "the bacillus tuberculosis has a tendency to die out like other germs when placed under unfavourable circumstances." I may now refer to additional evidence to the same general effect, which is to be found in the lectures on the Etiology and Prevention of Phthisis recently delivered at the College of Physicians by Dr. Arthur Ransome. Dr. Ransome says: "Up to a recent period not only was consumption supposed to be incurable.....the fate of the consumptive patient himself was generally looked upon as hopeless." And he quotes the dictum of Sir Thomas Watson—"Tubercular disease, when established, is beyond our power." But, he continues, "these views of the.....incurability of phthisis are now altered; for not only does clinical evidence show a considerable percentage of cure and improvement under judicious treatment, but the evidence derived from the post-mortem examination of adults who have died of disease other than phthisis shows that a very large percentage of persons have suffered and recovered from tubercular disease of the lungs." And Dr. Ransome quotes the late Dr. Moxon's view that "the life of the bacillus parasite is difficult, easily discouraged by unfavourable circumstances, like an aphis by an easterly wind." Nor must I omit to notice recent experience of tubercular peritonitis. It may be remembered that Dr. Gee some years ago published a lecture on cases of tubercular peritonitis which recovered under medical treatment; and numerous instances have lately been recorded—I noticed them in the lecture—in which patients have recovered from suppurative tubercular peritonitis after laparotomy and free drainage. My reason for quoting evidence from other sources is to show that those pathologists and clinical observers who are engaged in the study of tubercular disease in its most characteristic forms, whose opportunities are extensive, and whose authority I think will not be challenged, are enunciating views which exactly correspond with those that I have ventured to express in regard to surgical tuberculosis, and which confirm and emphasise the statement in the lectures that the estimate of the inveterate nature of tubercular disease which has been formed in the past, when no adequate treatment was adopted, urgently requires revision. As I have said above, Mr. Croft's proposition that "when tubercular disease commences in joint structures it follows the same course as it does in other structures of the body is quite without value as it stands. It leaves the question entirely open unless it is followed by some account, or at least some reliable estimate, of what that course is. But not only does he omit to notice the direction in which our knowledge of the natural history of tuberculosis has recently made such a remarkable advance that former opinions have been almost completely superseded, but he terms the author of the College lectures the "apostle of the old method of treatment," in contrast with Mr Barker, "the modern pathologist and excisionist"—Mr. Barker's view being that "there is much to justify our regarding tubercle in the light of a malignant growth, and our dealing with it accordingly." So far as I can judge, this conception is widely different from that which is entertained by those pathologists and physicians who are the exponents of our present knowledge of tuberculosis.

It will be convenient to notice here a point upon which Mr. Croft lays stress, but of which he scarcely seems to have appreciated the full weight. He says: "Growth and development of tubercle in the epiphysial lines are not by any means rare; indeed, I believe they are more common than anti-excisionists and many other surgeons are aware of." My own view is that very few pathologists or surgeons at the present day have any doubt as to the frequency of the deposit of tubercle in the situation alluded to. I regard the observation and general recognition of this fact as one of the most considerable of the recent advances of knowledge regarding surgical tuberculosis. But does not this fact upon which Mr. Croft insists involve a serious objection to excision? When tubercle is deposited in the epiphysial line either of the lower end of the femur or the upper end of the tibia, the thorough removal of the disease must necessarily interfere very seriously with the subsequent growth of the bone concerned. This free excision of the articular ends of growing bones is generally regarded as a violation of the rules of surgery. But the matter is one which Mr. Croft passes over very lightly. The only allusion he makes to it is in the following words, when he is speaking of arthrectomy: "Yet, providing all tubercular bone has been removed, the result (of arthrectomy) may be better than after an excision which touched or included the epiphyses themselves." There are many points respecting the results of excision which need to be illustrated by the production of cases; and it would be instructive if Mr. Croft would show the instances of excision in which, in carrying out the principle of free removal, the epiphyses have been in part or wholly cut away.

In dealing with my lectures, Mr. Croft discusses under six heads the points that are at present at issue between those who would and those who would not excise a joint as soon as matter forms or caseation is suspected. These points are (*a*) mortality, (*b*) necrosis, (*c*) shortening, (*d*) duration of illness, (*e*) risk and precipitation of general infection, (*f*) transitory nature of the tubercular tendency.

Mortality.—This is so important a part of the inquiry that it deserves close examination. In dealing with it, I first quoted the Clinical Society's report on the cases treated at the Alexandra Hospital for hip disease between 1865 and 1879. In this report the total mortality in 277 suppurating cases is estimated at 34·3 per cent. In commenting on these figures, Mr. Croft says: "But about the total of 277 cases I must point out that fifty-nine were untraced, nevertheless, the mortality is calculated at the

rate of 34·3 per cent." To meet this criticism, I must point out, in the first place, that this report was signed not only by Mr. Holmes, Mr. Hulke, Mr. Bryant, Sir William MacCormac, and the late Mr. Robert Lyell—surgeons who would not have offered figures which were not warranted by the material with which they had to deal—but by Mr. Croft himself. Secondly, it was obviously impossible to trace out all the cases, many of which had been discharged for upwards of ten years. In such an inquiry all that could be done was to deal judicially with such numbers as could be obtained. The figures are, no doubt, only approximate, but, endorsed as they are by the names I have quoted, they may be regarded as reliable until they are shown to be erroneous by evidence on the other side. Mr. Croft, however, advances no evidence—he merely challenges a report which bears his own signature. In the second place, I derived an estimate of the present mortality of hip disease, when treated without operative interference, from the cases which passed through the Alexandra Hospital between 1880 and 1888. In preparing this estimate I had the assistance of Mr. Bowlby, who is now surgeon to the hospital, and who agreed with the conclusions at which I arrived. 614 cases had been under treatment in the eight years alluded to. Notes in every instance were kept while the cases remained in the hospital, and when the patients were discharged they were, in the great majority of instances, still kept under observation by a lady nurse, who visited them at their own homes, and brought them up from time to time for surgical examination. They were, for the most part, lost sight of only when they had so far recovered that further supervision appeared unnecessary. Many were under observation for upwards of five years. Whenever progress was unfavourable the fact was entered in the notes. The mortality, so far as it could be traced, amounted to 6 per cent., but, as no doubt some deaths occurred as the result of relapses of the disease after the cases were lost sight of, a wide, and, as I believe, quite sufficient margin was allowed, and the death-rate was given as well under 10 per cent. Mr. Croft says: "It must be quite apparent that this rate is put too low." This view seems to be founded on the assumption that 402 of the 614 cases were entirely untraced, and that among these there must have been a further mortality. This assumption, however, is not correct. Many cases had passed out of sight, but only when the great majority of them were apparently cured. Seventy were still in the hospital, and another seventy were cases that had been discharged within the year, and were, therefore regarded as too recent to be used for evidence as to the final results obtained. Thus the condition of a considerable number of the 402 cases was approximately known, and it pointed to nothing that conflicted with the estimated mortality of 10 per cent. On what, if any, direct grounds Mr. Croft maintains that the mortality of hip disease, when treated by means short of excision, is upwards of 10 per cent., I do not know. Evidence upon this point can scarcely be derived from his own experience, nor has he, I think, ever adduced information from any other source. That the mortality (34·3 per cent.) shown in the Clinical Society's report was very high can be no matter for surprise. In the early years of the hospital many of the cases were admitted as a matter of charity, though they were in an obviously incurable condition. Abscesses were allowed to burst spontaneously, or were repeatedly aspirated, with the result that many sooner or later became septic; the present method of early evacuation and antiseptic dressing had not been introduced; and deformity was treated by forcible straightening under chloroform. But as treatment improved (and it must be remembered that the antiseptic method, which has so entirely transformed the results of excision, has had a similarly beneficial effect on the surgery of abscesses) the profuse and prolonged suppuration formerly so common in hip disease has become rare, and the large mortality due to exhaustion and amyloid degeneration of the viscera following suppuration has been also very largely reduced; besides, cases are now admitted at an earlier stage. Thus a considerable diminution of mortality might have been confidently expected even before the figures were examined. This is no more than has occurred in every department of surgery in which the antiseptic method, combined with other incidental improvements, has been introduced. Mr. Croft claims to have reduced the mortality of excision of the hip from 40 per cent., the rate attending his first series of forty-five cases, to 12·6 in his second series of fifty-six cases. This reduction from 40 per cent. to 12·6 is highly satisfactory. But while he announces such results, why should he, *ex cathedrâ* and without adducing any evidence, decline to allow that an alternative form of treatment has been attended by a similar degree of improvement?

Necrosis.—Mr. Croft remarks in his lecture that he has "always maintained that the possibility of the occurrence of necrosis is a reason for excising the hip-joint"; and continues: "The Clinical Society's committee found necrosis in nearly 60 per cent. of the specimens examined. That is an absolute fact. The sequestra were seen. Notwithstanding this, Mr. Marsh expressed an opinion, in his College lectures, that in his own experience sequestra are rarely produced, or that they are so soft and friable that they readily disintegrate and are discharged. ..... This is stated notwithstanding the fact that, in the first report of 277 suppurating cases, there were 192 returned as not cured and 87 deaths; and, of the 192, 59 had not been traced. In his second report he gives 614 cases; of these, 402 could not be traced. Deductions from 37 cases not intentionally selected, but practically best cases (as they were able to attend for examination), cannot be taken as conclusive on this question of necrosis. ..... When the statistics of hip disease attended with abscess are examined, a very interesting fact comes out—namely, that shortening often amounts to three or more inches. These cases suggest necrosis of femur, though there is no proof that they were so." These sentences, when they are first read, and when the attention is not allowed to concentrate itself on any points of grammatical construction, seem to carry conviction with them. They must, however, be looked at a little more closely. As to the sequestra observed in the specimens examined by the Clinical Society's committee: That the sequestra were seen is, as Mr. Croft says, an absolute fact. But the question is, When they were seen, what were they like? This the committee goes on to tell us: "Lastly, as to the pathological specimens examined by the committee, it was found that in nearly 60 per cent. more or less necrosis had occurred. This fact might seem to suggest the necessity for operating in a large proportion of cases of hip disease with suppuration. The committee, however, desire to point out that, while in some cases firm sequestra of considerable size were present, in others the sequestra consisted of small fragments of softened cancellous bone, which might probably have been disintegrated and thrown off in the discharge. That this breaking down and discharge of necrosed fragments is not rare appears to be indicated by the results obtained in the hospital cases, in many of which—although there had been prolonged suppuration, and although no sequestra had been either removed or seen to come away—all the sinuses had at length soundly healed. The severity of the suppuration in many of these cases is shown by the fact that of forty-seven instances, there were fourteen which showed one cicatrix, seven which showed two, and twenty-five which showed several, while in one case of double disease there were one on the right side and several on the left." Now, I would first point out that the words "more or less" in the first sentence of the report have escaped Mr. Croft's observation. And, secondly, it remains to ask why Mr. Croft selects the first two lines and a half of this part of the report and omits all the rest, and also his own signature which immediately follows? Having—by treating the Clinical Society's report in the manner indicated—established what he terms an absolute fact, Mr. Croft takes me to task for saying that in my own experience sequestra are either rare or are broken down and got rid of in the discharge. But there appears to be nothing in the Committee's report, to which he appeals, to render this view untenable. As a matter of fact, this view is almost identical with that which the Committee, including Mr. Croft himself, had expressed. The evidence which appeared to me sufficient to prove that necrosis in such a form as to necessitate operative measures for the removal of sequestra is rare was the following:—As to necrosis of the whole head, and its separation as a sequestrum, I mentioned that I had, so far as I could remember, met with it in only four cases, while Mr. Bowlby had informed me that neither at the Alexandra Hospital nor at St. Bartholomew's Hospital, where he had been surgical registrar for several years, had he ever seen it in a patient, or met with it in the post-mortem room. Secondly, I gave recent statistics from the Alexandra Hospital. It is necessary to state how these were prepared. Six hundred and fourteen cases had been under treatment since the Clinical Society's report was issued in 1880. As

it was hopeless to deal accurately with the whole number, the plan was adopted of taking such a proportion as we considered might be regarded as typical or representative. We went back to cases which had been discharged from the hospital for at least a year, and we then took the names in the order in which they stand in the admission book, and we worked backwards towards 1879. One hundred and sixty cases were written to, and seventy-six came for inspection. In no instance was a case that could be traced excluded from the report, and in no instance was a notice returned by the parents that the patient was dead or too ill to attend. The seventy-six therefore include every case in the 160 written to that could be traced. The question, of course, is whether these seventy-six may be regarded as a fair sample of the whole number. I believe they may. They were taken absolutely without selection, and, although they are a comparatively small proportion of the total 614 cases, they form in themselves a considerable group. Of the seventy-six, thirty-seven had suppurated, and this number was quite sufficient to show what were the general results obtained by the treatment that had been adopted. Mr. Croft says that, though not intentionally selected, these were practically best cases, as they were able to attend for examination. But it seems reasonable to suppose that, had the 160 cases included many failures, some at least of the parents would have brought the patients to be seen, or have written to say that they were too ill to attend. In the lectures I also mentioned that there were at the time in Mr. Bowlby's wards sixteen cases in which abscesses had been opened, and in all of which sound healing had occurred. So that here were upwards of fifty cases of suppuration, taken just as they came, in which all sinuses were soundly healed, with four exceptions in which they were quite trivial. And among them all there was not one in which a sequestrum had been either removed by operation, or extruded in the discharge—in other words, not one in which it had been necessary to operate for the removal of sequestra.

Now how is the difference between the views entertained by Mr. Croft and those which were expressed in the lectures on the subject of necrosis to be explained? I believe an explanation is readily found. It is that the specimens on which the Committee of the Clinical Society reported, and to which Mr. Croft appeals, were derived from cases which differed very materially from those to which I referred. The cases from which the specimens in question came were examples of advanced disease, in which the abscesses that had formed had either been allowed to burst spontaneously, or had been opened without the precautions which are now employed. Under these circumstances septic action was developed, and prolonged suppuration occurred, with the result that the condition of the bone grew worse and worse, till at length such necrosis was produced as was found when the specimens were examined, but which, as the report shows, was by no means always extensive; that is to say, the necrosis resulted, not from the uncomplicated progress of the tubercular disease, but from the prolonged suppuration which followed septic changes. In the cases I reported, on the other hand, the abscesses were opened antiseptically as soon as they were detected, and thus prolonged suppuration and the resulting necrosis were avoided. In fact, we see in the respective results of the two sets of cases a forcible illustration of the difference between the old form of practice and the antiseptic method. I will venture to assert, notwithstanding Mr. Croft's incredulity, that when rest is maintained, and abscesses, as soon as they are detected, are opened antiseptically, in not more than 5 per cent. of the cases will it be necessary to operate for the removal of sequestra.

In regard to Mr. Croft's remark (*vide supra*) that the shortening to the amount of three or more inches, which was present in some of the cases, suggests necrosis of the femur, I would ask, if this is so, what became of the sequestra? for none were either removed or seen to come away, and yet sound healing occurred. My own view is that these were cases of ulceration, or the old "caries," and that the bone had gradually been removed by absorption. This softening and loss of substance, without the formation of sequestra, is one of the most common of all the changes that occur in chronic inflammation of cancellous bone. Besides, in many cases in which there is great shortening of the limb after hip disease it is due in great measure to arrested growth, and only in part to loss of bone.

Shortening.—In regard to this Mr. Croft remarks: "I do not pretend to say that past statistics of excision compare favourably with statistics of well-cured cases of hip disease without operation. After excision, as it has been practised until lately, there was sure to be considerable shortening, but after cure without operation the amount of shortening was uncertain. ..... Mr. Wright informs us that in 100 cases of excision the average amount of shortening was 1½ in. In some the loss of length amounted to only ¼ in. The average shortening in cases of suppuration recently treated at the hospital for hip disease is given as 1 in., but the measurements given range from *nil* to 2in. or over." So far as I am aware, the most definite figures bearing on the amount of shortening after excision and after cure without operation are the following. In the Clinical Society's report it is stated that "in 13 verified cases (in Mr. Croft's series of 45 excisions) the average shortening was 2⅝ in., the minimum being ⅝ in. and the maximum 6in." In the same report it is said: "In 33 (recovering after suppuration in the Alexandra Hospital) in which the amount of shortening was noticed 24 cases of good cure showed an average shortening of 1¼ in.; 2 cases of good cure showed no shortening; 7 moderate cases showed an average of 3¼ in." These figures confirm Mr. Croft's view that excision formerly led to more shortening than did cure without operative interference. As to present results. Mr. Croft is in error in stating that the average shortening in Mr. Wright's 100 cases was 1½ in. The shortening is given in only 30 of the 100 cases, and the 1½ in. gives the average in these 30 and takes no account of the remaining 70. In some of these 30 cases, as I mentioned in the lectures, the shortening was only ¼ in., and in several it was under 1 in. I hope that Mr. Wright, who has recorded his cases with great fulness and accuracy, may at some future time state the amount of shortening in some of the remaining 70, in a large proportion of which it could not be given when his work was published, as the wounds had not healed. In the 37 cases of suppuration treated without operation which I mentioned in the lectures, 3 had no shortening, 17 had less than 1 in., 12 had between 1 in. and 2 in., 3 had 2 in. or over, and one was a double case. Thus the figures at present at our disposal indicate that the amount of shortening is much the same in excision and non-excision cases. But further information is required, and an important contribution to the subject will be made when Mr. Croft furnishes the results obtained in the fifty excision cases to which he refers in his lecture, but of which he gives no detailed account. If these cases could be exhibited, or even a considerable proportion of them, they would form a group that could not fail to be important and instructive.

Duration of illness.—In the College lectures I thought it right to state in clear terms the average total duration of the 37 specimen suppuration cases to which I alluded. The period was a little under five years. The time is undoubtedly long. But the total duration of the cases must, of course, not be confused with the period occupied by treatment. In many of the cases the disease had been in progress between a year and two years and a half before the treatment was begun, so that the treatment itself, up to the time that cure was apparently complete and the patients were using the limb freely, occupied between two and three years, while during a considerable portion of this time the children were moving about with a Thomas's splint and a high boot and crutches—a condition of existence involving no "illness," and in which the comfort of a child's life is but very little interfered with. The statistics as to the period occupied in recovery after excision which are at present available are found in (*a*) Mr. Croft's first series of 45 cases in which the period was 1⅞ years; (*b*) in Mr. Wright's account of 100 cases, in which in only about 20 per cent. had the wound healed when the report was published; and (*c*) in Mr. Croft's second series of 50 cases, in which 27—a little more than half—were "known to be cured in two years." Of these, we are told, one was cured in a month and eight cured under a year.[1] When Mr. Croft says "cured in a month," I presume he means that the wound had healed, not that the child was walking, without support, on the limb. (*d*) Lastly, the cases shown at the Clinical Society by Mr. Barker and Mr. Pollard. These cases were admirable in their immediate result—i.e., as to the healing of the wound. Their like had not previously been seen. They were a great improvement

[1] THE LANCET, Feb. 8th, 1890, p. 282.

on the cases just alluded to, and unquestionably they mark a very noteworthy advance in the operative treatment of hip disease. It still remains, however (as they were all recent when they were originally shown; none of Mr. Pollard's patients had attempted to walk, and were still in Thomas's splints), to learn how useful a limb can be obtained, and how long it is before patients can dispense with supports, and move about freely without the recurrence of deformity.

General infection.—We come next to the question of general infection. I know no pathologist or surgeon who doubts that dissemination may occur, and in every modern text-book this doctrine is clearly stated. Before, however, we adopt excision, as soon as caseation is suspected (Mr. Barker), or whenever pus is known to be present (Mr. Croft), two things must be established: first, that diffusion is of frequent occurrence; secondly, that diffusion and the resulting general tuberculosis can be prevented by excision.

1. It must be shown that dissemination is frequent; for, if it is rare, the chances that the patient may escape are so much in his favour that an operation, such as the removal of one of the large joints, would not be justifiable. But has the frequency of dissemination of tubercle from the joints, when no operation is performed, ever been established? I believe not; nor so far as I know has either Mr. Croft or Mr. Barker furnished any evidence whatever on this subject. In the College lectures I expressed the opinion that the danger of general infection from the joints (and from the testis) as primary centres had been much exaggerated. To establish this view I referred to the Clinical Society's report, which states that in 260 suppurating cases there had been at the time of the report 16 deaths from tubercular meningitis. This Mr. Croft says "is interpreted into a mortality of 6·15 per cent." The word "interpreted," I think, indicates Mr. Croft's view that tubercular meningitis is not to be regarded as synonymous with general tuberculosis. My own observation leads me to hold that in children the two words mean practically the same thing. But on examining the death table I find that the only other cases of tuberculosis are entered as "phthisis" or "phthisis and dropsy" (these are 8 in number, or 3 per cent. in the 260 cases); and it seems clear that they were not examples of acute general tuberculosis, so that my interpretation does not appear to have altered the estimate which bears Mr. Croft's signature. I also stated that the cases treated at the hospital for hip disease between 1880 and 1888 showed a mortality from acute tuberculosis of, as far as Mr. Bowlby and myself could learn, a little less than 2 per cent. I further remarked that "an estimate of the frequency of general infection may be derived from Mr. Croft's 45 cases, and Mr. Wright's 100 cases of hip disease treated by excision, for in many of these the disease was well advanced before the operation was performed, and after the operation convalescence was in many retarded, or was never reached, so that the conditions favourable to general infection were present for a considerable period. In Mr. Croft's 45 cases, with a total mortality of 35·5 per cent., the mortality from tubercular meningitis was only 4·4 per cent., while in Mr. Wright's series of 100 cases there was apparently only one case of acute general infection." As 80 of these 100 remained unhealed, the almost complete absence of acute general tuberculosis seems to me a very strong piece of evidence upon the point under discussion. Having offered evidence from these three sources, I arrived at the conclusion that "although the possibility of general infection from a tubercular joint is a distinct element of danger, the risk is so small that it cannot be regarded as affording any material support to the operation of early excision." The evidence derived from these four separate groups of cases, which are drawn from three distinct sources, and which together make up a considerable number, appears to me of such weight that it can only be broken down by clear evidence on the other side. Yet Mr. Croft, although his experience of hip disease in all its stages must be unusually large, produces no evidence whatever, nor does he even tell us what rate of mortality from general tuberculosis he has in his mind when he urges excision as a preventive measure. Instead of doing so, he writes as follows: "*Risk of general infection and risk of precipitation of general infection.*[2] (*a*) This risk does not belong exclusively to the excisionist side, though it must be admitted that the risk has been less on the side of those who advocate treatment without operation. (*b*) The latter party make use of the risk referred to as a reason for avoiding operation. (*c*) On the other hand, the modern excisionist uses the reason on behalf of early excision. He advocates the performance of the operation at a stage before the risky period has arrived." It will be observed that the words in italics indicate two separate risks: (1) The occurrence of general tuberculosis from a local source; (2) the precipitation of general tuberculosis by operative interference at the seat of the primary disease. In what follows, Mr. Croft, in sentence *a*, speaks of these two risks as if they were one and the same; and thus, while he should obviously refer merely to risk 1 he includes also risk 2, and so indicates that the danger of precipitating general infection by operation lies partly at the door of those by whom no operation is performed. In sentence *b* he refers to risk 2, but in sentence *c*, though apparently still speaking of this same risk 2, he has really thrown it over, and is back again to risk 1. I feel that so long as Mr. Croft treats the subject with such lenient logic as this, instead of advancing evidence, I may hope that the figures I gave and the conclusion at which I arrived in the lectures may not be very wide of the mark.

Then as to the question whether early excision can protect the patient against systemic dissemination; in other words, whether by operating early we can be sure of removing all tubercular material, so that none remains to constitute a further source of infection. This question Mr. Croft "would dismiss in a few words." But when we remember that early excision is recommended for this express purpose, and when Mr. Croft repeatedly and emphatically alludes to the prime necessity of completely removing all the diseased tissues, it is impossible to pass the subject over in this manner. It appears to me that the answer to this question must be in the negative. For what security is there that no tubercle is left behind? It is true we are cautioned to go wide of the diseased tissues, but how can we be certain that all the infected synovial membrane has been removed? Then as to the bones. Mr. Croft alludes to the fact that tubercle is often deposited in the epiphysial lines. But in such instances—more common, Mr. Croft believes, than anti-excisionists and many other surgeons are aware of—what is to be done? If the surgeon cuts wide of the disease he must sacrifice the epiphyses; while, on the other hand, if he saves the epiphyses, he does not "perform the operation thoroughly." On which horn of this dilemma is the surgeon to place himself, and which does Mr. Croft himself prefer? Further, how can the surgeon assure himself that there is no deposit elsewhere in the body—e.g., in neighbouring glands, or in the glands of the posterior mediastinum, from which dissemination may still occur. These are all material points which ought not to be dismissed without an answer of some kind. But there is another and very important matter to be considered. I mentioned that Mr. Barker has pointed out that excision may precipitate the very result it is intended to prevent. Cases have occurred amounting, according to his figures, to no less than 10 per cent. of the total number of deaths following excision, in which "rapid general miliary tuberculosis supervened in such a way as to suggest strongly, if not to prove, that the surgical interference was the exciting cause of the generalisation of the disease." As I stated in the lectures, this rapid generalisation after operations, though it undoubtedly occurs, is, in my opinion, much less common than Mr. Barker thinks. But how does Mr. Croft deal with this drawback to excision? Does he produce any evidence, or even express an opinion? Neither one nor the other. He merely says that I take advantage of Mr. Barker's admission and condemn him out of his own mouth, and that my view is supported only by my own belief that infection in non-operation cases is rare. But, in the first place, my condemnation of Mr. Barker out of his own mouth comes to this, that, though I referred to the danger incidental to excision which Mr. Barker had strongly dwelt upon, I added that I thought he had exaggerated its amount. Thus, although Mr. Croft does not perceive it, I was really helping his own side. Secondly, it seems obvious that I can have no strong evidence to give in proof of an occurrence which I believe to be comparatively rare. I have done my best to grasp Mr. Croft's meaning. I hope I have not misunderstood him after all. In another sentence Mr. Croft says: "If the risk (of general infection) on each side is not considered a grave one from a numerical point of view, then I think the credit belongs to

[2] I have introduced *a*, *b*, and *c* to facilitate reference.

the side who would abolish the risk by early extirpation of the infective element." These words seem to mean that, even if a surgeon considers that the risk of general infection is small, he should still endeavour to abolish it by early excision. Nothing, I think, could show more clearly what a trivial proceeding the removal of the large joints of the body is in the eyes of some operators of the present day.

Lastly, Mr. Croft says it was a noteworthy fact that in my lectures I said nothing about arthrectomy, and adds that there may be more than one good reason for the omission. My reasons were the following:—1. I was speaking mainly of the hip, a joint for which I believe arthrectomy is not considered, even by its warmest advocates, to be appropriate. 2. I was noticing the views of Mr. Croft and Mr. Barker as to early excision, and neither of these two surgeons has, so far as I know, shown or published any results of arthrectomy. 3. I had seen only a few cases in which the proceeding had been adopted, and these, while they had not made a favourable impression on my mind, were yet too few to justify any strong opinion against the operation. I will now, however, state my belief that arthrectomy is not destined to furnish a satisfactory result except in a very limited number of cases. My anticipation is that as the surgery of the joints advances, arthrectomy and excision will alike fall more and more into disuse.

There is a fact which deserves to be especially noticed in regard to the employment of excision in the treatment of tuberculosis of the joints. This is that in the well-to-do the operation is almost unknown, although tuberculosis is certainly by no means rare. Such a fact clearly shows that means exist by which the operation can be avoided: that in other words the operation is not essential. But it shows also that those in whom excision could be performed under the most favourable conditions are those who next to never avail themselves of the advantages which it has, in the view of its advocates, to offer. At the present day the well-to-do freely accept the advances which surgery has lately made. When ovarian disease is present they submit to ovariotomy, for there is no alternative, and, besides, they know that they can trust the remedy that is offered to them. In the same way they submit to lithotrity, colotomy, the removal of tumours, and many other grave operations. But, as to excision, they and their advisers almost invariably reject it, for they learn, first, that the results are unsatisfactory, and, secondly, that there are alternative and more promising means to be adopted. Of course it may be urged that the rich are enabled by their resources to avoid methods of treatment which are the best that can be employed for poor patients. There are many cases in which this is true. But this is not the ground on which excision is at present advocated. Excision is now advocated upon grounds, many of which are either purely pathological or purely surgical: that tuberculosis should be regarded in the light of a malignant disease, and be treated accordingly; that the limb secured by excision is only a trifle shorter than that which is left after cure without operation; that sequestra are present which require removal, &c. Such grounds as these apply equally in the case of the well-to-do as in the case of the poor, and the first of them would render it imperative to excise every local development of tubercle—wherever it could be got at, and as soon as caseation was suspected—in the rich as well as in the poor. To such a point, indeed, have the arguments in favour of excision been carried by some of its advocates, that the possibility of curing tubercular joint disease by means short of operation is almost entirely ignored.

NEW SCAVENGER DEPOT, UPPER THAMES-STREET. Mr. Deputy Green, in the presence of the Streets Committee and other members of the City Commissioners of Sewers, formally laid the foundation-stone of a new Scavengers' Depôt, in course of erection by the Commissioners of Sewers in Upper Thames-street. The chairman stated that the committee looked forward to a great improvement in the cleansing of the streets. The depôts were of the greatest use, not for a deposit of any refuse, but for the assembling of men and boys, who there could take their meals by night or day. About 100 men and youths were employed on the work. It is also intended to provide on a contiguous site a building which will contain mess-room, workshop, kitchen, and offices, superintendent's dwelling-rooms, and foreman's house.

THE

OPERATIVE TREATMENT OF DISLOCATIONS IRREDUCIBLE BY ORDINARY MEANS.

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IN this paper are given notes of cases in which, after ordinary means of reduction had failed, joints were explored through an incision, and either reduced or otherwise treated. In contrast with these are quoted cases where operation had been declined by the patient or not advised by the surgeon.

CASE 1. *Irreducible dislocation of the elbow backwards, seen four weeks after the injury; operation; cure.*—Wm. T. W——, aged eleven, was admitted to the Leeds Infirmary on Sept. 7th, 1886, with a well-marked dislocation of the left elbow, both bones being displaced backwards. No fracture could be made out. The arm was fixed at an angle of 130°, and the movements were very limited, not exceeding 10°. The injury had been caused four weeks previously by a fall from a pony. On Sept. 10th the patient was put under ether and reduction attempted. Some increased mobility was obtained, but the dislocation could not be reduced. A vertical incision, four inches in length, was then made over the elbow-joint; the triceps tendon was divided, and the joint opened. It was then seen that the coronoid process was broken off and fractured into two parts, one being attached to the tendon of the brachialis anticus, and the other (a smaller fragment) to the stump of the coronoid process; this latter was subsequently removed. The external lateral ligament was ruptured and displaced, and through the rent in the ligament the head of the radius was thrust, the displaced ligament being placed between the head of the radius and the capitellum, thus preventing reduction. On division of the ligament, the dislocation was reduced, the parts slipping easily into position. The joint was well irrigated with perchloride of mercury solution, the triceps tendon stitched with four catgut sutures, and the wound closed, a drainage-tube being inserted. The arm was placed on an internal rectangular splint, and the wound dressed with gauze and salicylic silk. The wound healed by first intention, and the patient was discharged on Oct. 5th. Two months later the patient had a good, freely movable, and useful elbow-joint.

CASE 2. *Old irreducible dislocation of the elbow-joint backwards, seen five months after the injury; excision.*—Lily W——, aged twenty-two, was admitted on Oct. 30th, 1889, on account of a dislocation of her left elbow backwards, which had been caused by her being thrown out of a trap five months previously. No attempt at reduction had been made. The elbow was fixed at an oblique angle, the movements being limited to 12°, and the patient being unable to feed herself with the left hand. On the 31st the patient was anæsthetised, and reduction attempted by manipulation and by pulleys, but without avail. An incision was therefore made over the posterior part of the joint, when the capitellum was found to have been broken off and fixed in the coronoid fossa by means of callus. The arm could not be brought into a good position until the lower end of the humerus had been removed, after which this was easily effected. The edges of the wound were then brought together, and the arm was fixed on an internal rectangular splint. The patient was discharged at the beginning of December with the wound quite healed, and when seen in February the movements of the elbow seemed to be extremely good, and the patient said that her arm was as useful as it had ever been.

CASE 3. *Dislocation of both bones of right elbow backwards.*—A. B——, a schoolboy aged fourteen, was brought to see me six weeks after an injury to his right elbow, caused by a fall when playing football. I found a dislocation of both bones backwards, and tried to effect reduction under an anæsthetic, but failed. Further operation was advised, but declined, and when I last heard of him, a year after the injury and about three months ago, he was unable to feed himself with his right arm, and the movements of the elbow were extremely limited.

CASE 4. *A case of supra-coracoid dislocation of the*

shoulder, seen six weeks after the accident.—In January, 1889, a youth aged sixteen was brought to the infirmary with a supra-coracoid dislocation of the right shoulder. After consultation, on Feb. 2nd the patient was fully anæsthetised, and reduction was attempted by manipulation and by pulleys, but without success. The joint was therefore exposed by a vertical incision of four inches and a half, when it was discovered that, in addition to the dislocation of the head of the humerus, there was a longitudinal fracture separating the great tuberosity from the shaft, and extending down the bone for some distance beyond the line of incision. Reduction could not be effected on account of the glenoid fossa being filled with callus and plastic material thrown out around the fracture. The wound was closed and drained, and was quite healed on the ninth day. On March 17th, when seen as an out-patient, he had a good range of movement in the arm, and intended resuming his work in a short time.

CASE 5. *Dorsal dislocation of right hip, seen ten weeks after the injury; excision of head of femur.*—John S——, aged thirty-five, residing at Altofts, was admitted on March 19th, 1889, with the history that he had been kicked by a horse on the inner side of the right thigh ten weeks previously. Dislocation of the femur was diagnosed, and was said to have been reduced, but on admission the usual signs of dislocation on the dorsum ilii were found. On March 21st the patient was anæsthetised and an attempt made to reduce the dislocation by manipulation, but without effect. On March 28th, the patient was put under ether, and an effort made to reduce it by means of pulleys, but without success. On April 11th, after consultation, a curved incision of about three inches in length was made over the head of the bone; all tight bands and everything which appeared to prevent reduction were divided, but reduction could not be made, as the acetabulum was found to be filled up with callus, so that it was almost level with the crest of the ilium. The head of the bone was therefore excised and the limb brought into fair position. The operation was performed antiseptically, and a drainage-tube was used. Bryant's splint was then applied. The wound was dressed on the night of the operation, and not again for some days. It pursued an aseptic course and healed kindly. He was allowed to go home on a Thomas' splint and crutches on May 22nd. On Dec. 12th (nine months after the operation) the following description was given me by my house surgeon, Mr. Sellers: The right gluteal region appears flatter and wider than the left, the distance between the middle line and the great trochanter being 7¼ in. on the right and 6 in. on the left; the superior border of the right great trochanter appears about 1½ in. above that of the left; there is 1¾ in. shortening between the anterior superior spine of the ilium and the inferior border of the patella. There is a semilunar cicatrix extending from the right ischial tuberosity to the upper border of the right great trochanter. The thigh can be flexed on the abdomen painlessly to about 15° beyond the vertical; it can be adducted, abducted, and circumducted to the full normal extent, and can be extended fully. The foot points forward, and there is no eversion or inversion of the limb. The patient can walk with a raised shoe and without a stick for a little way, but with the aid of a stick he can walk a considerable distance.

CASE 6. *Irreducible thyroid dislocation of hip, seen eight weeks after the injury.*—L. S——, aged fifty-three, was admitted on June 27th, 1888, with all the signs of thyroid dislocation of the right hip-joint, due to an accident eight weeks previously. On July 5th the patient was anæsthetised, and reduction attempted both by manipulation and by means of pulleys, but without success, and he returned home on July 9th, unrelieved. When seen six months afterwards, he walked with considerable difficulty, even with the aid of two sticks.

CASE 7. *Dislocation of the left hip.*—In 1888 I was asked to see a gentleman in a neighbouring county, whose horse had fallen on him in the hunting field six weeks previously. There was so much swelling at the time of the injury that the medical man who saw him did not make a diagnosis, and only suspected that matters were not going on well a few days before I was sent for. I found a sciatic dislocation of the left hip, which resisted repeated attempts to reduce it by manipulation and by means of pulleys, although the patient was fully anæsthetised. Operation was suggested, but declined; and although the patient, when heard of a year after, could walk with the aid of two sticks, he was unable to ride, and suffered great inconvenience in locomotion.

CASE 8. *Irreducible dislocation of finger, seen three weeks after the accident; operation; reduction.*—A. C—— was admitted on Nov. 2nd, 1888, on account of a dislocation of the first phalanx of the index-finger backward, due to a fall three weeks previously. Reduction was attempted under an anæsthetic, but failed. An incision was therefore made on the outer side of the finger, and the joint was opened, when the anterior fibro-cartilage was found displaced between the bones, where it was held by the external lateral ligament. On division of the ligament, the fibro-cartilage was withdrawn from the joint by a blunt hook, and the dislocation was then easily reduced. The wound healed by first intention, and when the patient was seen a month afterwards the joint was found to be perfect in all its movements. Several similar instances might be given, but this will suffice.

CASE 9. *Dislocation of the first phalanx of the little finger.*—Mrs. P——, aged forty, fell heavily forward and sustained a dislocation of the first phalanx of the little finger. When I saw it, eight weeks after the injury, I was unable to effect reduction, and the patient declined operation. The joint is at present (six months after the accident) fixed, and the finger is useless and always in the way.

Remarks.—I would draw attention to the several conditions which prevented reduction. In Case 1 the head of the radius had slipped through a rent in the external lateral ligament, where it was embraced like a button in a button-hole. In Case 2 a fractured capitellum was fixed by callus in the coronoid fossa, and the removal of the lower end of the humerus seemed to be necessary in order that a movable joint might be made. In Case 8 the anterior fibro-cartilage had slipped between the ends of the bones, which could not be reduced until the fibro-cartilage had been drawn out of the way. In Case 4 a split fracture with the formation of callus prevented reduction, but as a false joint was in process of formation, and as there seemed to be a likelihood of fair movement, the head of the bone was not further interfered with. In Case 5, much to my surprise, the acetabulum was filled up with callus, and the rim was almost level with the ilium; the head of the femur was therefore removed, and the limb could then be brought into fair position. I have introduced a few instances of old dislocations out of many I have seen, in which operation was declined, or was not recommended, in order to show how unsatisfactory these cases are if left permanently unreduced, as compared with those in which further operative treatment has been carried out. In conclusion, as I have never seen any harm, but always benefit, to result from the treatment suggested, I feel justified in advocating a resort to operation in all cases of irreducible dislocation when the general condition of the patient is such as to warrant the belief that he will bear an operation.

Leeds.

ON THE

USE OF THE DENTAL TREPHINE IN THE TREATMENT OF SPURS AND DEVIATIONS OF THE NASAL SEPTUM AND SYNECHIÆ OF THE NASAL FOSSÆ.

BY ADOLF BRONNER, M.D.,
SURGEON TO THE BRADFORD EYE AND EAR HOSPITAL.

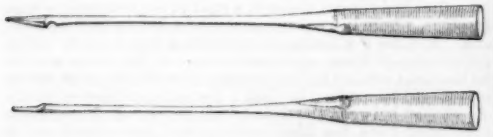
ON examining the interior of the nares by anterior and posterior rhinoscopy we are struck by the large number of cases in which the septum narium is bent or thickened. Morell Mackenzie examined 2152 skulls, and found that in 1657 cases, or 77 per cent., there was a more or less unsymmetrical position of the septum. Zuckerkandl[1] found that in 370 skulls the septum was symmetrical in 123 cases, unsymmetrical in 140, and irregularly thickened in 107. He says that the septum was always symmetrical in skulls of children under seven years of age. Loewenberg[2] found that the septum was perfectly straight only in about 14 per cent. of the cases he had examined.

The great importance of these deviations and hypertrophies, commonly called spurs, is that they in many cases

[1] Normale und Pathologische Anatomie der Nasenhöhle, 1882.
[2] Anatomische Untersuchungen über die Verbiegung der Nasenscheidewand (Zeitschrift für Ohrenheilkunde, xiii., p. 17).

impede the free passage of air, and thus prevent normal nasal respiration. This is, of course, of the utmost importance in connexion with the development and diseases of the lungs and chest. They also give rise to reflex symptoms, such as asthma or frontal headache; they bring on diseases of the middle ear and throat; they affect the voice, and are thus of great importance to public speakers, actors, and singers, as Lennox Browne has so ably pointed out. They also prevent the introduction of instruments into the nostril, such as the snare for removing nasal polypi, the galvano-cautery, and the Eustachian catheter. The latter is, of course, very important in the treatment of catarrh of the middle ear, and we thus find that it is quite essential for aurists to be able to recognise and treat these abnormal conditions. Many methods have been suggested for removing the spurs and deviations of the septum. I will, however, not go into all these details, and will only as briefly as possible record the methods which I employ in most well-marked cases; of course in some cases I adopt the ordinary methods.

I have had small trephines made[3] of various sizes and lengths similar to the trephines used for opening the mastoid antrum, but with a smooth and cutting edge. The



trephine is attached to an ordinary dental engine. In operating for spurs I paint the mucous membrane over the spur with a 20 per cent. solution of cocaine, and then inject five or six minims of the solution under the mucous membrane at several places with a Pravaz syringe. The external wall of the nostril is then drawn outwards with a Jurasz or modified Loewenberg speculum. The engine is turned, and the trephine placed on the spur and pressed gently backwards, parallel with the septum. The trephine cuts through the spur very readily, and little or no pressure is required. The operation is not nearly so painful as when the knife or saw are used. In cases of exostosis (which are very rare) I should use the ordinary trephine with saw-edge. An anæsthetic is never necessary, except when the patients are extremely nervous. There is very little hæmorrhage, much less than when cocaine is not used. This fact seems to me to be of great importance, as it greatly simplifies and shortens the operation. After the operation I plug the nostril with cotton-wool soaked in glycerine and iodol, and leave the plug in for at least five days. In speaking on the operations for spurs, I should like to protest against the assertion which is found in most text-books, that you can easily remove the spurs with the galvano cautery. This is quite contrary to my experience. I have tried it in several cases, but never once succeeded. Of course any thickened mucous membrane can be removed, but not a spur in the strict sense of the word.

In treating deviations of the septum, in which the deviating part is thickened (and this is very often the case), I apply the trephine in the same way as for the removal of a spur. Great care must, however, be taken not to perforate the septum. In cases of deviation in which there is no local thickening, I follow to a certain extent the suggestions of Hartmann.[4] After having injected cocaine, I make a U-shaped incision through the mucous membrane, cutting, as it were, round the deviation. The open end of the incision is directed backwards. I then detach the mucous membrane, and throw the flap backwards. The trephine is applied to the anterior end of the wound, and pressed backwards and inwards till it reaches the base of the flap. It is then withdrawn, and the detached piece of the septum cut off. The flap is drawn forwards to cover the wound, and a flat thin piece of wood or metal pressed against it, and the nostril then well plugged with cotton-wool. The wood is withdrawn or cut off. The plug is left in for five or six days, and then carefully withdrawn and renewed. I also use the trephine with cutting edge in cases of synechiæ of the turbinated bones with the septum or floor of the nares.

I am perfectly aware that the foregoing methods of operation are not entirely new or original. I have, however, failed to find a detailed description in any text-book or journal. The advantages of these methods (of course, only in well-selected cases) are, that they are very efficacious, very simple, and do not take up much time. They are practically painless, and an anæsthetic is therefore not necessary. There is very little hæmorrhage, and the patient is never incapacitated for work for any length of time. In fact, most of the patients on whom I have operated walked home after the operation, and felt no bad after-effects whatever. I should like, before concluding, to protest strongly against any operation being performed without very pressing symptoms. There can be no doubt that in late years nasal surgery has been very greatly (to use a very mild expression) abused. Operations have been performed which were quite uncalled for, and instruments have been used which are more like some mediæval instrument of torture than an instrument for operating on such fragile structures as the turbinated bones or septum of the nose.

Bradford.

[3] Down Brothers.

[4] Deutsche Medicinische Wochenschrift, 1882, No. 51.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON POISONING BY MUSSELS.

By SIR CHARLES A. CAMERON.

ON June 30th, Mrs. O'Connor, her five young children and her maidservant—residing at Seapoint, Co. Dublin—partook of a meal of stewed mussels. In about twenty minutes after the ingestion of the mussels, some of the children stated that they felt a prickly ("pins-and-needles") pain in their hands. Graver symptoms rapidly supervened, and in less than an hour one of the children died, the mother and three other children succumbing within two hours after eating the mussels. The chief symptoms were vomiting, dyspnœa, swelling of the face, want of coördination in movement, and spasms, principally in the arms. The patients appeared to have died asphyxiated, their faces being intensely livid. One of the children and the maid (the latter had eaten but few of the mussels) suffered very much, but recovered. Medical assistance came rather late, and was not of much use. The mussels had been procured from a small sheet of water, to which the sea had access, but which received fresh water and some sewage. Examinations of the water at low and high tides showed that its saltness was twice as great when the tide was in, a proof that land water drained into it when the tide was out. This land drainage would necessarily, from local conditions, be impure.

It was deemed necessary for judicial purposes that the cooked mussels, and the matters vomited by the patients, should be examined for ordinary poisons. This was done, with negative results. The uncooked mussels, compared with mussels of the same size from the open sea, appeared to have much larger livers, and their shells were very brittle. An attempt to extract an alkaloid was made. The generic tests applied clearly proved the existence of a leucomaine, which, indeed, was obtained in crystals visible under the microscope, and corresponded to those described by Brieger as existing in the poisonous mussels which he examined. The quantity of material available did not, however, yield a sufficient quantity of the leucomaine for a thorough examination. I have procured a supply of mussels from the pond in which the poisonous mussels were found, and hope to be able to extract from them a substantial quantity of the leucomaine, which will probably be found identical with Brieger's mytilotoxine ($C_6H_{15}NO_2$). The mussels are mixed with mud having an offensive odour.

The Seapoint case is another instance of poisonous mussels being procured from foul or stagnant water. In this case the opinion of M. Dutertre, that the liver of poisonous mussels is the seat of disease and the generator of the poisonous leucomaine, seems confirmed; but I cannot agree with the French observer that the disease is never the result of the poisonous nature of the food of the mussel. I have read all, or nearly all, the cases of mussel poisoning on

record, and I gather from such details as are given with respect to the places in which the mussels were found that they were in contact with sewage or stagnant water.

Dublin.

A CASE OF VERTICAL DISLOCATION OF THE PATELLA.

BY ED. A. PIGGOTT, L.R.C.P. & S. EDIN., L.S.A. LOND.

THE following case occurred in my practice some time since. This form of dislocation being somewhat uncommon, and great difficulty having been experienced in its reduction in some recorded cases, are the principal reasons for my publishing these notes, and, I think, make the case worthy of observation.

Walter M——, aged thirty-two, an agricultural labourer, when endeavouring to gain the high road from a field by means of jumping a ditch, alighted upon uneven ground, and, losing his footing, made a sudden and violent muscular effort to regain his equilibrium, in which he failed, and fell into the ditch, from which he was unable to raise himself. Fortunately help was at hand, and he was conveyed to his home in the immediate neighbourhood. On arriving at the patient's cottage, some four miles distant from my residence, and making a careful examination, I found that the patella was dislocated vertically—in fact, completely twisted round upon its axis, so that its internal edge was resting between the condyles of the femur upon the trochlear surface of that bone, its external edge projecting beneath the integument in front of the knee-joint in a line almost directly forwards, but with a very slight inclination outwards. The man was in extreme pain, and the slightest attempt at movement of the knee-joint caused intense agony. I endeavoured to reduce the dislocation by ordinary manipulation, but after several attempts this proved impracticable. As, unfortunately, I had no supply of chloroform with me, I decided to make a further attempt at reduction before procuring it, especially as the patient was in a state of semi-intoxication, which circumstance would necessarily favour my efforts. Having procured some stout towelling, I placed a clove-hitch round the ankle-joint, and with the aid of three powerful men made extension directly downwards, at the same time raising the limb (the patient lying upon his back on the floor) with counter-extension beneath the axillæ. During the period extension was being exercised I made considerable pressure on the outer edge of the patella with my fingers and thumbs. Then *suddenly* relaxing the extension, I sharply flexed the leg upon the thigh, or rather my assistants did, at the same time keeping up the pressure upon the patella, when the bone slipped into its normal position with a very audible "crack." The limb was then put up in a suitable splint, and a lotion containing tincture of opium combined with solution of subacetate of lead applied, ten grains of Dover's powder being prescribed internally at night. The local inflammatory mischief was very slight, and at the end of three weeks the patient was able to walk with no other support than a stick.

Remarks.—I considered myself fortunate in reducing the dislocation, with, comparatively speaking, so little trouble. This I attribute principally to my having seen the case almost immediately after the injury was inflicted, and to the efficient and unhesitating manner in which my untutored assistants carried out my instructions.

Clare, Suffolk.

PILOCARPINE IN POISONING BY BELLADONNA.

BY WM. MCGOWAN, B.A., M.D.,
MEDICAL OFFICER MAGHERA DISPENSARY.

ON Dec. 25th, 1889, at about 11.30 A.M., a messenger came for me to visit immediately Mrs. M——, aged about thirty-seven, who was said to be dying from having taken a quantity of a liniment by mistake for a dose of a mixture she had been ordered. As the remains of the bottle were not brought to me for inspection, I had no means of knowing or finding out then what the poison was. Taking with me a hypodermic case, stomach pump, &c., I arrived at her residence, three miles distant, shortly after 12 o'clock. I found, on examining the bottle, that the liniment was linimentum belladonnæ B.P., and that at about 8 A.M. she had taken a large tablespoonful of it. Her condition was very serious. She was totally unconscious, and breathing stertorously; there were frequently recurring convulsions; the pupils were widely dilated, so that there was only a ring of iris, and they were not influenced by light; the extremities were cold, the heart greatly excited and weak, and the pulse scarcely perceptible at the wrist. She presented all the appearances of approaching death. Some attempt had been made before my arrival to procure vomiting, but without success. As she could not swallow, I injected one-tenth of a grain of apomorphine. This failed to produce vomiting, and, fearing the depressing effect sometimes produced by the drug, I did not repeat it, but at once introduced the tube of the stomach-pump, and thoroughly washed out the stomach. The stomach was almost empty, and I could not detect any odour of belladonna in the water returning from it. I then injected hypodermically one-third of a grain of pilocarpine, passed the catheter, and withdrew nearly a pint of urine, injected a pint of strong hot coffee into the rectum, and used flagellation with a wet towel over the chest and cheeks. I also applied mustard to the calves of the legs. In about half an hour improvement was observed; her countenance became more natural. A little later she looked about her, and was soon able to swallow small quantities of sal volatile and strong coffee. At 2 P.M. I left her, ordering the sal volatile and coffee to be continued alternately, and warning the attendants against allowing her to sleep. At 5 P.M. I returned, and found her sitting up in bed in a rather excited condition, and talking deliriously. She knew me, but did not realise her position or know anything of what she had passed through. I injected another third of a grain of pilocarpine. It did not at any time produce perspiration, but only a little softness of the skin. From this time recovery was uninterrupted. She complained of thirst and dryness of the throat, and remained very weak, being unable to get up for nearly a week.

Remarks.—I consider this case worth recording, on account of the undoubted action of the pilocarpine in antagonising the belladonna. Owing to the length of time from taking the dose and my seeing her (over four hours), the poison must have been entirely absorbed, as, indeed, was clear from the absence of odour of belladonna in the washings of the stomach, and from the very marked and characteristic toxic effects. Although I used the stomach-pump, I cannot attach much importance to this part of the means adopted. There can therefore be little doubt as to the effective part played by the pilocarpine in the cure, and in preserving a valuable life to a large family of helpless children.

Maghera, co. Londonderry.

SIMULTANEOUS FRACTURE OF BOTH CLAVICLES.

BY W. H. BOGER, M.R.C.S. ENG., L.R.C.P. ED.

I MUST candidly admit that until reading Mr. Owen's article in THE LANCET of July 5th I was unaware that simultaneous fracture of *both* clavicles was such a rare event. Having, however, had a case quite recently, possibly it may be worthy of record.

J. S——, a farmer, aged forty-five, was riding in a steeplechase at the Fowey annual races, when his horse, which he had failed to draw in soon enough to take the first fence, came with such force against the hedge that it threw its rider, who, turning a complete somersault in the air, disappeared into the adjoining field. The horse then turned, and, scrambling over after the others, slipped and rolled over on top of its rider. I happened to be at the other end of the field, and so only saw the accident from a considerable distance, and on arriving at the scene of the disaster found they had dragged the man away from the spot where he had fallen to avoid the oncoming horses from doing him any further damage. I made inquiries as to the position &c. in which he fell, but could gain nothing definite, so that whether it was likely to have been done before or after the horse fell on him I am not prepared to say. Unfortunately he turned out a very tyrannical patient to have to deal with, for he would neither lie still nor keep the bandages on I placed round him, and finally insisted on going home four days after the accident, a distance of some thirty miles, in a close carriage. The fractures on both sides were situated about the junction of the middle and outer third, and came

into very fair positions when lying flat on his back on a hard bed with a pad in each axilla and his arms bandaged cross-wise in front of his chest, but as he persisted in having them free, and would return home so soon after his misfortune, the probable results seemed somewhat lamentable. I have heard once since from his wife, who informed me that the doctor they called in had been obliged to put on straps (?) But I have written to him for more explicit details.

Fowey, Cornwall.

PSEUDO-XANTHOMA AND MORPHŒA AND ANÆMIA.

By ANGEL MONEY, M.D., F.R.C.P.

IN the remediable anæmias of middle-aged women I have noted pale papular elevations on the eyelids as symmetrical as areas of xanthelasma often are, and having all the characters, except the colour, of these buff-coloured plaques. When these are present the pigmented purplish discolourations, especially of the lower eyelids, so common in nervous exhaustion have frequently been very marked. In fact, the combination of neurasthenia, anæmia, and a dark complexion makes this sign of disease more striking than any other combination known to me. It is in this class of case that the elevated lumps in the skin known as morphœa may be detected on the limbs, generally the arms, of anæmic and nervous women. These lumps have nothing in common, in my experience, with true rheumatic nodules of subcutaneous or other distribution. I have not seen genuine valvular rheumatic heart disease in this connexion. The limbs affected were fat, and belonged to women who, however "poor" their blood and nerves were, were certainly not wanting in fat in any portion of their anatomy. I have never seen them in association with the anæmia of phthisis or of saturnism, though I have specially looked for them during the last six years.

Harley-street, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

PADDINGTON INFIRMARY.

A CASE OF EXTREME ATROPHY OF THE SPLEEN WITHOUT SYMPTOMS DURING LIFE; REMARKS.

(Under the care of Dr. THOMAS SAVILL.)

AS age advances atrophy of the spleen is met with, similar to that which affects other lymphatic organs, such as the tonsils, the lymphatic glands, and the thymus. Not infrequently atrophy of the spleen is found at an earlier age (in the adult), but as there are no symptoms by means of which its presence can be diagnosed, it is left to the post-mortem examination to reveal its presence. It is rare, however, to find it shrunken to such an extreme degree as in the case recorded below, if we may judge by the few cases recorded in the Transactions of the Pathological Society of London. Dr. Gibb[1] exhibited a spleen which weighed only half an ounce removed from the body of a patient aged sixty-seven, who had died from exhaustion, the result of persistent diarrhœa, and referred in his remarks on the case to other examples of extreme atrophy; to Dunglison, who met with a case in which the spleen was reduced to the size of a small almond; to Portal, who wrote of one not larger than a nutmeg, and to Cruveilhier, who had seen it weigh scarcely a single drachm. Dr. Richardson[2] had a patient under his care with aneurysm of the cœliac axis of some years' duration, and at the post-mortem examination the spleen was found to be not larger than that of a child of six; the age of the patient was fifty-four. Dr. Parkes[3] described a case, that of a man aged thirty-two, who died with choleraic diarrhœa, in whom the spleen was excessively atrophied; here the atrophy was supposed to have resulted from repeated attacks of inflammation. With regard to the causation of splenic atrophy, Dr. Bristowe[4] writes: "In some cases it appears, like cirrhosis of the liver, to be consequent on an interstitial overgrowth of connective tissue; in some, as also occurs in the liver, to the investment of the organ in a dense and slowly contracting fibrous capsule."

Harriet W——, aged forty-three, was admitted into the Paddington Infirmary on May 29th, 1890. She had been suffering for some nine months from cough and shortness of breath, but had kept at work until three weeks before admission. She had also suffered from night sweats and emaciation, but had never spat any blood. She was admitted in a very emaciated condition, with the signs of very advanced phthisis affecting both lungs, but chiefly the left. Although the signs of tuberculosis were unmistakable, and there were signs of extensive breaking-down in both lungs, the temperature was only 99° on the two evenings which she survived after admission—namely, on May 29th, at 8 P.M., 99°; on the 30th, at 8 A.M., 99·8°; on the same day, at 8 P.M., 99°; on the 31st, at 8 A.M., 98·8°. The urine was normal, and the other organs presented no abnormal signs. She was somewhat anæmic, but not more than is usual in such cases, and the only feature which she presented which at all departed from the usual course of such condition, besides the absence of pyrexia, was delirium at night. The family history, so far as she knew, was free from any record of consumption. She had had three children, all of whom were living and healthy. Her previous history, with the exception of a cough in the winter for the last three or four years, had been free from any ailment. She died on the afternoon of the third day after admission.

Necropsy.—The post-mortem examination was made by Dr. Hillier seventy-two hours after death, and the following is his report:—Pericardium: adhesions throughout, especially over the right auricle. Left pleura: A few adhesions down the anterior margin and at the apex. Right pleura: Universal dense adhesions, which required dissection from the pericardium and diaphragm. Peritoneum natural. Heart: Weight 7½ oz. Much decolourised clot in both sides of the organ, more especially in the right ventricle. Most of the right auricle, pulmonary artery, and pericardium covering them were densely adherent to the lung. The valves were healthy, except the mitral, which was a trifle thickened with some recent gelatinous material. The aorta contained traces of atheroma. The substance of the heart was pale and slightly friable. Right lung (28 oz.): Upper lobe completely riddled with irregular cavities, crossed by trabeculæ, and containing brown purulent fluid; very little pulmonary tissue left. The remainder of the lung presented the appearance of catarrhal pneumonia, studded with miliary tubercles. Left lung (31 oz.): Apex consolidated, containing an extensive deposit of tubercles. One cavity the size of a filbert in the centre; scattered tubercles in the lower lobe, which was œdematous and congested. The liver (45 oz.) was pale and fatty. Under the microscope it presented fatty degeneration and some cirrhosis. The kidneys (right 5½ oz., left 4½ oz.) were pale; capsule slightly adherent in places; small cyst on the surface of the right kidney. Microscopically it showed some increase of connective tissue, otherwise normal. The dura mater was normal; the arachnoid over the vertex was opaque and thickened to about twice the normal, and there was opaque lymph beneath it in places. The pia mater generally was congested. No tubercles discovered after careful search with the microscope in the fissure of Sylvius or elsewhere. The spleen was only found after careful search. It was very small, weighing only 56 grs., and measuring 1⅜ in. by ½ in. by ½ in. It was slightly adherent to the stomach, was firm on section, and under the microscope presented some increase of the fibrous tissue, but was otherwise normal. Nothing was discovered which could throw any light on the atrophic condition of the spleen.

Remarks by Dr. SAVILL.—The normal weight of the spleen varies between 8 oz. and 10 oz. (Quain), and its dimensions average about 5 in. by 3 in. by 1 in.; the spleen of this patient was therefore about one-thirtieth the normal bulk.

[1] Trans. Path. Soc., vol. xiii., 1862, p. 245.
[2] Asclepiad, 1884, p. 112.
[3] Med. Times and Gaz., vol. ii. 1852, p. 637.
[4] Theory and Practice of Medicine, p. 567.

Physiologists teach us that the spleen is an organ which has very important functions in the manufacture or elaboration of the corpuscular elements of the blood; and so it seemed to me important to place this case on record, for this patient did not seem to have suffered in any way from having so small a spleen. How long the atrophy had existed it is impossible to say, but it was considerably more than a mere variation of size in the spleen, such as is known to occur in conditions consistent with perfect health. It is quite possible it had existed for some time before death, and it may even have been congenital. The patient presented no signs which are usually attributed to disorder of the spleen. A pathological increase of size in the spleen is often attended with an increase in the number of white corpuscles in the blood. Unfortunately the blood of this patient was not examined during life, but there was nothing which pointed to the necessity for such an examination. But with such a marked atrophy of the spleen (one-thirtieth the normal size), if it had given rise to any symptoms they would surely have been of a striking kind; this patient's appearance, however, did not give rise to the belief that her blood contained either an excess or diminution in the number of white blood-corpuscles. The only departure in the history of the case from an ordinary case of phthisis were, first, the delirium, which was quite accounted for by the cortical congestion of the brain, and the thickening of the arachnoid found after death; and, secondly, the absence of pyrexia. Is it possible that this latter may in some way have been connected with the atrophic condition of the spleen? May it not be possible that the spleen is in some way connected with the regulation of the body heat? At any rate, the importance which physiology attaches to the spleen is not always in keeping with the teachings of pathology. Sir Spencer Wells has on several occasions removed the spleen, as recorded in the Medico-Chirurgical Transactions. On two occasions the patients made a good recovery, and I learn from him that both patients are still alive, and exhibit no abnormal signs.

NORTH STAFFORDSHIRE INFIRMARY.

HÆMORRHAGE INTO THE BLADDER; SUPRA-PUBIC CYSTOTOMY; DEATH; REMARKS.

(Under the care of Mr. SPANTON.)

THIS case is an example of a method of treatment not often adopted for the evacuation of blood from the bladder. Supra-pubic cystotomy has been employed, for this purpose, more especially to remove firmly adhering clots; but, with the improved evacuating catheters and aspirators, it is usual to trust to them, with antiseptic injections when required, to break down and evacuate the blood-clot. For a bleeder the patient lived to a considerable age before the hæmorrhage occurred from this small vessel and led to death. It would be interesting to know the family history in the case. At present the evidence of the hæmorrhagic diathesis is but slight. For the following report we are indebted to Mr. A. S. Barling, house-surgeon.

G. B——, aged forty-four, a caretaker, was admitted into this hospital suffering from retention of urine. He stated that he was quite well until three weeks ago, when he began to have difficulty in passing urine, accompanied by some slight pain referred to the perineum. The dysuria increased, and two days before admission ended in complete retention, for the relief of which his medical attendant passed a silver catheter twice a day. On the last occasion this was followed by considerable bleeding.

On admission, the patient was a well-built man, looked pale and wan, walked with the greatest difficulty, and was apparently in great pain. On examination of the abdomen the bladder was easily felt, reaching almost to the umbilicus. A silver catheter, No. 8, was passed without any difficulty, and three pints of blood-stained urine drawn off. From the rectum there seemed to be some enlargement of the prostate, and it was decidedly tender. There was no rise of temperature. Ergot and belladonna were given internally, and the patient of course kept in bed. After this the catheter was passed every eight hours, and the bladder washed out with a lotion of one part of tincture of hamamelis to four of water. Under this treatment the urine became clearer, although there were occasionally small clots. It should be mentioned that the urine was acid, and at no time were any casts or pus cells seen. At 4 P.M. on July 9th the catheter was passed as usual; no difficulty was experienced. Two hours after this, the patient having made no complaint and nothing wrong having been noticed by the nurse, the bladder was found to be distended up to the umbilicus. A catheter was passed, but only a little blood-clot came away. The bladder was seemingly full of blood-clot. Mr. Spanton was accordingly summoned, and he proceeded to open the bladder above the pubes. Two pints of clotted blood and a quantity of urine were removed, and then the cavity was explored. A small bleeding point was seen just at the entrance to the urethra, and this was touched with solid perchloride of iron. A large drainage-tube was then inserted and the rest of the wound stitched up in the usual way. The patient never rallied, and died three hours after the operation.

Post-mortem examination.—The bladder contained about half an ounce of clear urine. There was an abscess of the prostate, about the size of a walnut, which had burst into the urethra, and in doing so opened an artery which was large enough to be seen distinctly with the naked eye. This seemed a very small lesion to account for death, but on inquiring from his friends afterwards it was found that he was a bleeder, and had almost bled to death on one occasion, in quite the orthodox way, after the extraction of a tooth. I may add that the patient himself was questioned on this point, but denied ever having bled profusely at all.

Remarks by Mr. BARLING.—This case seems to be worthy of record for several reasons: 1. It emphasies the fact that a soft catheter should always be used if possible. It seems probable that the abscess was burst in this case by the catheter, although no abnormal sense of resistance was felt. 2. It shows the value of hamamelis locally applied as a hæmostatic. 3. It adds another to the long list of cases which prove how readily the inside of the bladder can be explored through a supra-pubic incision.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.

THORACIC ABSCESS CAUSING FATAL DYSPNŒA; NECROPSY; REMARKS.

THIS case is an example of a rare condition—the formation of an abscess in the thorax, independently of disease of the bony framework, pleura, or lung. This led to a fatal ending from dyspnœa, to prevent which the presence of the tracheotomy-tube in the trachea was useless. In children we occasionally meet with abscess in the mediastinum due to the suppuration of a bronchial gland, and death may ensue in a somewhat similar manner, the gland occasionally making its way more or less completely into the bronchus. Abscess in the adult is rare, excepting as an extension of septic inflammation of the cellular tissue from a wound of the neck. For the following account we are indebted to Mr. Rust, house surgeon.

J. F——, aged thirty-four, a labourer, was admitted to the Kidderminster Infirmary on April 18th, 1890. He stated that about three weeks before admission he caught a very severe cold, which gradually got worse, and finally prevented him from working. He had just recovered from a sharp attack of influenza, which had left him very weak. On presenting himself in the out-patient room he had all the usual symptoms of bronchitis. As he appeared to be in a very low and weak condition, he was admitted as an in-patient. He did well for three days, gained strength, and the bronchitis appeared to be rapidly clearing up.

April 22nd.—Breathing rather obstructed; patient otherwise comfortable. Terebine inhalations and warm fomentations applied to throat. Physical signs unaltered. Temperature 99·2°.

23rd.—About 7 P.M. the patient was very suddenly attacked with intense dyspnœa, hurled himself out of bed, and became intensely livid and almost unconscious. Ether was injected hypodermically. The patient rallied after five minutes and afterwards became comfortable and slept well. On laryngoscopic examination nothing abnormal

was seen, beyond slight congestion of the fauces. Temperature 99°.

24th.—At 10 P.M. the patient had an attack similar to that of yesterday, but did not rally so quickly. Chloroform was administered, and he was kept partially under its influence for about twenty minutes; he then slept. Temperature 98 8°. At 11 P.M. a third attack seized him, and it was decided to open the trachea at once. This was done in the crico-thyroid space. When the tube was inserted, no air was heard to enter. A No. 9 gum-elastic catheter was passed down through the tube as far as the bifurcation of the trachea. The patient breathed well through this. The catheter was retained one hour, the man afterwards becoming more easy. After removal breathing went on well through the tube.

25th.—Passed a fair night. Very abundant mucoid expectoration, viscid and ropy; great difficulty occasionally in clearing tube. Temperature 100°.

26th.—The tube was plugged. Breathing went on well through the larynx. The patient spoke clearly, and stated that he felt quite well.

27th.—Had two slight attacks of dyspnœa during the night, from which he soon recovered; but at 1 A.M. another sudden severe attack seized him from which he never recovered, and died in a few minutes.

Necropsy.—A general catarrhal laryngitis and tracheitis; no œdema. Lungs engorged; no pneumonia. Pericardium full of serum. In front of the trachea and just behind the first and second right costal cartilages there was a large inflammatory mass, pressing the trachea nearly an inch to the left. The mass was closely connected with the innominate and right carotid and subclavian arteries, and contained in its centre about three ounces of thick creamy pus. It extended upwards into the cellular tissue of the neck about 2½ in. on the right side.

Remarks by Mr. RUST.—The chief points of interest in this case, I think, are the sudden and severe onset of symptoms of laryngeal obstruction coming on while the patient was apparently rapidly convalescent, the obscurity of their origin, and the entire absence of any physical signs which would indicate the presence of an abscess of any sort, seeing that the maximum evening temperature was only 100°; also the fact of the obstruction being caused by pressure from without, its very short duration, and the unusual situation for an idiopathic abscess to form.

Reviews and Notices of Books.

Pulmonary Consumption in the Light of Modern Research. By STEPHEN SMITH BURT, M.D. New York.

DR. BURT disclaims any novelty in his views, and only professes to put in a succinct form the results of modern research with regard to consumption. He adopts with enthusiasm the germ theory, and, although holding that it has not enabled us to discover any specific for tuberculosis, he does not relinquish "the hope that industrious experimenters will some day discover the secret of bacterial warfare, so that innocuous germs can be marshaled to drive the disease-producing fungi from the field." It is well known that this attempt has been made, and that Professor Cantani of Naples claimed to destroy the tubercle bacillus by means of the bacillus termo. Unhappily, fuller investigations have not confirmed his results. Dr. Burt's pathological position is implied in the following sentence: "Thus the famous saying of Niemeyer, that the greatest danger for the majority of consumptives is that they are apt to become tuberculous, must undergo revision in the light of recent developments; for the greatest danger now threatening mankind is that cells of a retrograde metamorphosis may chance to encounter the tubercle bacillus in its wanderings." He deals in a forcible fashion with the well-known facts of the deadly mortality from tuberculosis which prevails among soldiers in ill-ventilated barracks, the inmates of prisons, the residents in convents and nunneries, and among domestic animals when crowded together, or wild animals when confined in cages. As regards the *rationale* of heredity in consumption, Dr. Burt holds to the view (a very probable one in our opinion) that the germs of tubercle are rarely transmitted, but that degraded cells enter into the constitution of the new organism, and that these afford an inviting nidus for the bacillus. He has no faith in germicide remedies, and gives it as his opinion that "some of the undefiled animal fluids are the best germicides." As regards contagion, he believes that tuberculosis is never conveyed from patient to medical attendant, but that "persons living in permanent intercourse with these patients often become infected with the disease." He also endorses the statement of Cornet, that the mortality among nurses between the ages of fifteen and twenty is six times greater than that of the entire population. He recounts the very instructive experiment of Trudeau as illustrating the importance respectively of the specific cause of tubercle and an environment favourable to its growth. "Some rabbits inoculated by Trudeau with the tubercle bacilli and placed in relations deleterious to health became tuberculous. Another group of these same rodents, likewise confined, but not subjected to infection, did not develop the disease. While still another group—like the first inoculated, yet not put in a similar situation, but, on the contrary, favourably located as to hygiene—mostly escaped the malady." Dr. Burt holds that tuberculosis is sometimes self-limited; that it sometimes blazes up for a time and then smoulders out for lack of fuel. He sums up the conclusions of a thoughtful and common-sense treatise as follows: "Phthisis pulmonalis is an infectious disease, only the soil must be fertile or the bacteria will not take root and grow; the inheritance of the affection is simply the descent of the degraded cells presenting a vulnerable point for a possible encounter with the vagrant germs; that all specific treatment is futile in view of our present knowledge; and that, though persistent destruction of the infectious matter is our best means of prophylaxis, yet to restore the vitality of the lung tissue is as important as to destroy the tubercle bacilli."

A New Medical Dictionary. By GEORGE M. GOULD, B.A., M.D., Ophthalmic Surgeon to the Philadelphia Hospital, &c. London: H. K. Lewis, Gower-street.

THERE has probably never been a time during which so many medical dictionaries have appeared, both at home and abroad, as during the last year or so. The work of Dr. Gould claims to be essentially a new work, all definitions being framed "by the direct aid of new, standard, and authoritative text-books." It certainly bears very little resemblance to previous works of the kind, in nearly all of which a great deal of space is devoted to obsolete terms. In order to give an idea of the kind and extent of information to be obtained from it, we may give one or two examples.

"*Actinomyco'sis* (ακτις, μυκης, a fungus). A parasitical, infectious, inoculable disease first observed in cattle, also in man, due to the presence, in abscesses and sinuses, of the *leptothrix-streptothrix*. The most frequent and most curable form is when the abscesses form about the jaws and teeth. The treatment is prophylactic—guarding, by proper cooking, against the transference of the parasite; and curative—the evacuation and antiseptic treatment of abscesses, sinuses, carious teeth, &c. When the parasite has found a nidus in the lungs or digestive tract, all treatment is so far useless." (The meaning of ακτις is given in reference to a previous word.)

"*Pyæ'mia* (πυον, pus; αιμα, blood). Septicæmia, with the formation of secondary embolic or metastatic abscesses in various parts of the body."

"*Traube-Hering Curves* Pulse curves, showing that the

varying activity of the vasomotor centre suffices to produce undulations in the blood-pressure tracing."

It may sometimes be thought that too much space is devoted to such terms as Raulin's Liquid, Adenine, and Cruso-creatinine; and too little to many of every-day occurrence, such as Bright's Disease, Catheter, or Syphilis; but though the author does not say so, he probably thinks that information on the more common diseases &c. is easily obtained from various sources, and that therefore it is of more importance for him to afford as much information as possible about ptomaines and other terms which are not so freely described in ordinary text-books. It will be observed that the Greek words given have no accents; rough breathings are, however, given, and if this is understood no confusion need occur. There do not seem to be many important omissions. Some terms, however, of which the following may be mentioned, might have been included with advantage—Acajou or Acajuba, Acanthocephala, Accentuation, Equatorial Plate, Metakinesis, Siberian Plague, Spongiopiline, Sporangium, and Sporidium. The work is essentially American, and so a number of terms, such as Car Sickness, Quizzer (the equivalent of our student's word "grinder" or "coach"), Shot-gun Prescription (one with many ingredients, with the hope that some one may cure the disease), are included which appear somewhat strange to English eyes. A very full list of American mineral waters is given, but there is no mention of English or continental waters. In a few places the American spelling might confuse the reader: thus Centre is not mentioned, though in the previous column there is a long space devoted to Center. The references to official preparations are naturally to those of the U.S.P. No book, of course, is free from misprints and slips; the present volume, however, does not seem to contain an inordinate number. Under Achorion, tinea favosi is printed instead of tinea favosa, Eye Teeth are described as the incisors, Resorcine is said to be a fluid, Sprue is described simply as thrush, and in the tables of weights and measures the Russian *funt* is spelt *fuat*, and is given as 1·097 lbs. avoirdupois, though it is really only 409 grammes, or 0·903 lb.

The work will, however, be found to be of great use even to those who are not Americans, it being more complete and more up to date than any other medical dictionary of similar dimensions in our own or, indeed, as far as we know, in any other language. Comparing it with the last editions of Hoblyn's Dictionary and Mayne's Vocabulary, it contains a good many more words of recent introduction than either, but does not go so fully into derivations as the former, or give the quantities of the vowels, which is such a valuable feature in the latter work.

Leçons du Mardi à la Salpêtrière. Par Prof. CHARCOT, Policlinique, 1888–89. Tome II., avec 126 figures. Pp. 548. Paris: Bureau du "Progrès Médical." 1890.

THIS second volume, containing a verbatim report of M. Charcot's famous cliniques at the Salpêtrière, is certain to receive a hearty welcome in this country. Those who have been fortunate enough to be present at these lectures and demonstrations, and who have witnessed the rapid, masterly way in which M. Charcot possesses himself of the essential points in each case, and the graphic picturesque style in which he is in the habit of addressing his class, will read these Leçons with peculiar pleasure. But they will be not less useful to senior students and to practitioners who desire to get accurate mental pictures of both common and rare forms of nervous disease. In each lecture about four cases are introduced, and a verbatim report is given of the questions asked in order to obtain facts about the history &c., and of the patients' answers. The result of any physical examination is given, with, in many instances, admirable illustrative diagrams, and then follow, in his own words, the remarks made by M. Charcot about each case. In this way the reader obtains a picture of various types of disease, almost equal in distinctness to that which he would have obtained had he seen the actual case. Apart from the general merit of the work, many of the subjects of the lectures are of great interest. During the course many cases of hysteria were shown. These were not all women, but many cases of male hysteria with hysterogenic points, hemianæsthesia, &c., came under observation. Two cases are also fully described, in which grave organic disease was masked by hysteria. In one case the patient was suffering from locomotor ataxy, in the other from disseminated sclerosis, the true diagnosis in the latter case being arrived at only after a careful examination of the action of the ocular muscles and of the condition of the fundus oculi. Many cases of chorea, paraplegia, infantile paralysis, and syringo-myelia are described, also a case of chronic poisoning by bisulphide of carbon in a man. The main symptoms in the last case were right hemiplegia with hemianæsthesia, of the type common in hysterical patients, with retraction of the right field of vision, and amblyopia of both eyes. M. Charcot appears to regard all the symptoms as hysterical, the toxic influence of the bisulphide merely acting as an excitant in the same way as a blow or a fright might in another case. This conclusion seems entirely at variance with many other cases recorded by Nettleship and other observers, in which there were well-marked changes in the optic discs evidently directly due to the poison. Much interest attaches to the lecture delivered at the beginning of last year, on Motchoutkowsky's method of treating locomotor ataxy by suspension, since it was this lecture which was mainly responsible for the now moribund fashion, recently so prevalent, of treating all cases of ataxy and many other chronic nervous diseases in this manner. Space prevents our noticing many other subjects of great interest, and we strongly recommend our readers to read the lectures for themselves.

Physiological Botany. 1.: Outlines of the Histology of Phænogamous Plants. 2.: Vegetable Physiology. By GEORGE LINCOLN GOODALE, A.M., M.D., Professor of Botany in Harvard University. Sixth Edition. London: Macmillan & Co. Pp. 500.

This work constitutes the second volume of Gray's Botanical Text-book. The first volume was the well-known treatise of Asa Gray on Structural Botany; and two more volumes are promised — viz., Cryptogamic Botany, by Wm. G. Farlow, and a Sketch of the Natural Orders of Phœnogamous Plants,—both of which may we trust be soon completed. The present volume has the date 1885 appended to the preface, and no more recent observations on any point appear to have been entered up to this period. However, the references to the previous literature of botany are frequent and accurate, though we miss any notice of such memoirs as those, for example, of F. Schwartz on Protoplasm, Scholtz on the Influence of Extension on Growth, and many others. But, after all, what is wanted in a text-book is not so much the most recent knowledge, which may or may not be correct and at least requires confirmation, as that well-ascertained facts are placed before the student in a clear and intelligent manner, and that a due proportion is maintained between the several parts, so that the more important are brought out distinctly and impressed on the mind of the student, with such aid as illustrations can give, whilst the less important are relegated to the background and only lightly sketched in. In these respects the work before us is excellent. It contains within a compass of 500 pages accurate information on all the principal points of vegetable

physiology, embracing the structure and growth of cells and of the tissues they form, the diffusion, osmosis, and absorption of fluids, the assimilation of food, the metabolism of the tissues, with separate chapters on the Growth and Movements of Plants, on Reproduction, the Seed and Germination, and the Resistance of Plants to Untoward Influences. A notable feature of the treatise, which is indicative of a deep underlying improvement in the education of the student, is that it commences with a chapter devoted to the histological appliances required for the examination of plants, including instruments, media, reagents, staining agents, and the best means of mounting specimens; whilst it ends with a series of practical exercises, which the student will do well to follow. All this shows that the student is no longer expected to accept the words of the master on trust, but that he is supposed to see things for himself, to verify statements, and to make himself familiar, not with an account, however accurate, given by another man, but with the objects themselves. This is the only true way to learn, and by which a student can become fitted for the prosecution of scientific botany. All those preparing for the higher examinations, and all who are interested in plant life, may read this volume with pleasure and profit.

Outlines of Practical Histology: a Manual for Students. By WM. STIRLING, M.D., Sc.D. With 344 Illustrations. London: Charles Griffin and Co., Exeter-street, Strand. 1890.

WE can confidently recommend this small but concisely written and admirably illustrated work to students. They will find it to be a most useful and reliable guide in the laboratory, or in their own room. All the principal methods of preparing tissues for section are given with such precise directions that little or no difficulty can be felt in following them in their most minute details. In speaking of the spinal cord, for example, Professor Stirling begins by describing the mode in which it should be hardened, and the principal features that should be noticed by the student, and then gives successively the methods of staining by Weigert's hæmatoxylin method, with Biondi's fluid, with benzo-azurin, with nitrate of silver after the plan of Golgi, and with Pal's method, in each case giving the strength of the solutions and the special points to which attention should be directed. No less than eleven forms of microtome are described, Dr. Stirling apparently giving the preference to Minot's and to Roy's form as modified by Malassez, and to the Cambridge Rocking microtome. The account of karyokinesis, though brief, contains all that need be known. Here, as in most other sections, additional exercises are given, treating of mitosis in the omentum of the newborn rabbit, mitosis in the amnion, and an account of the method of Martinotti and Resegotti. In regard to mitosis in the amnion he recommends that after the rat is killed the uterus is to be excised and placed in a saturated watery solution of picric acid. The uterus and membranes around each fœtus are then to be opened, and the hardening process allowed to continue for twenty-four hours. The tissues are next to be washed well in water, and hardened in the various strengths of alcohol, beginning with 70 per cent.; or the washing in water may be dispensed with. Then a portion of the amniotic membrane is to be selected, and a small part of it tinged in Ehrlich's acid hæmatoxylin, diluted one-half. The membrane may also be hardened, he adds, in Flemming's fluid, and stained with saffranin. Specific directions for the manufacture of the different staining agents, and particulars of all the instruments required, are given in the first part of the work. The volume proceeds from a master in his craft, and is a credit to Owens College.

New Invention.

STETHOSCOPE WITH ROTATORY CHEST-PIECE.

THIS instrument, which comprises an ingenious modification invented by Mr. Cory of Bournemouth, may be regarded as one step further in the evolution of the stethoscope, which was so happily sketched by Dr. Wilks in these pages a few years ago. The invention consists in such an alteration of the chest-piece of the binaural stethoscope as to permit of its direction being altered so that it can be readily adapted to the chest wall in almost any position of the patient, without inconvenience to the auscultator. It will be observed also that much more metal enters into the construction of the chest-piece than usual, whilst the globular expansion at the junction of the lateral portions, where the hinge movement takes place, facilitates rather than impedes the transmission of sound. Careful comparative trials have convinced us that the stethoscope is equal to any in its conductivity of sound.

MEDICAL JURISPRUDENCE AND ITS STUDY.

To the Editors of THE LANCET.

SIRS,—My experience as an examiner in this subject is that medical students treat it very lightly, and a study of many cases reported in the public papers shows that medical practitioners regard it with little care. Nothing can be more gratifying to our profession than the confidence which is placed in us by the general public; and, upon the other hand, nothing can be more annoying than the scant respect paid to medical evidence by judges and juries. This want of respect to medical evidence can be laid only at our own doors. The first law of evidence is a clear testimony as to facts, and not to opinions. There can be no more painful reading than the vague, uncertain, and unsatisfactory evidence often given in court by medical witnesses. What is required of us is that we examine our case carefully, form an opinion justified by the facts of the case, and finally state the conclusions which these facts justify in simple and clear language, being at the same time ready to support them by a detailed statement if necessary. Such a course as this, universally followed, will do a great deal to give weight to our evidence, and to restore confidence in our opinion. The failure to do this depends upon ignorance; and this is the more inexcusable because there is no real difficulty in acquiring a knowledge of medical jurisprudence. Books of the first excellence are easily to be acquired. I hope, Sirs, that you may be able to find room for my letter, and that it may bring the importance of the subject more prominently before us.

I am, Sirs, your obedient servant,

J. L. KERR, M.B.,
Examiner in Medical Jurisprudence and in Chemistry, University of Aberdeen.

Crawshawbooth, Manchest July 22nd, 1890.

THE LANCET.

LONDON: SATURDAY, JULY 26, 1890.

IT will be seen from a report which we publish in another part of this impression that a Commissioner of THE LANCET has been for some months past engaged in collecting materials, by correspondence with the nurses of the London hospitals, for the discussion of the conditions under which their work is carried on. At the time when this was put in hand there was no immediate prospect of any official inquiry such as has been since undertaken by the House of Lords' Committee. To some extent, therefore, private effort has been superseded; but, notwithstanding this, we think it will be found that no small interest attaches to the report of our Commissioner. In the first place, the materials here collected have been derived from a wider field than has yet been covered by the evidence tendered to the Lords' Committee, which has as yet dealt exclusively, so far as the nursing arrangements are concerned, with one institution. And, further than that, the evidence tendered at Westminster is so very conflicting that few, we fear, will find leisure and interest to read it through, and fewer still ability to collect any very clear ideas from the perusal.

Our Commissioner, on the contrary, is able to present within a small compass a very large part of the case for the nurses, and, moreover, to add suggestions for the improvement of their condition which will, we hope, receive the careful consideration of all hospital authorities. The point to which in this preliminary statement attention is chiefly drawn is that of the prolonged hours of duty of which nurses universally complain. That periods varying from twelve to fourteen hours at a stretch are excessive periods of toil admits of no dispute. If the work of the nurse were *always* what it certainly *often* is—work, that is to say, which permits no appreciable intermission of physical labour during the working time—such hours could not be borne. At other times, however, the exigencies of the ward work permit the nurse to take her duties easily, and to rest her limbs while maintaining a sufficient watch over her patients. Under these conditions long hours do not involve any excessive strain, and it is doubtless this circumstance which has caused the mischief of long hours, when consumed in pressing and arduous work, from being clearly recognised and effectually corrected. The problem of applying a remedy is one which it will certainly tax the administrative ability of the governing bodies to solve. Some of the nurses, as will be seen from our report, echo the demand of other toilers for an eight hours' day. That suggestion in its crude form is, we regret to say, impracticable. To reduce by one-third the hours of duty of every nurse would involve the employment of three persons in the place now filled by two. The consequent outlay would certainly, as our Commissioner points out, be beyond the means of the hospitals. But we quite agree that it does not follow from this that the admitted grievance of the nurses must be left unredressed. A substantial improvement may be practicable even if the change which some desire and all would welcome be in its full measure impossible. The plan of keeping a staff somewhat in excess of the demands of the work upon the basis ordinarily accepted at the present time is one which has been practically adopted in some institutions, and, we believe we may add, with very satisfactory results. Probably its efficiency would be increased by applying it systematically, and that a practicable system is possible we make no doubt. We hope, then, that in this respect, at least, the attention which is being given at the present time to questions connected with nursing will result in the general adoption of some scheme by which the personal tax of nursing work may be diminished, and the reasonable complaints of these often overworked women may be silenced by the effective remedy of their grievance.

The report deals with several other matters which will not, we are sure, escape the attention of those concerned. For bad cooking there can be no excuse. Nothing but inattention on the part of those finally responsible for the conduct of affairs can ever explain the existence of so unmistakable and easily detected a defect in the housekeeping department. This is a complaint which, as one would suppose, is directed against particular institutions, and does not affect the metropolitan hospitals as a whole. If the peccant authorities could be identified, we think that public opinion would be hard upon them. And certainly not without reason. It must in the nature of things be that the profession of a nurse will make large demands upon those who follow it. That the disadvantages of the position should be aggravated by such a wholly unnecessary hardship as the want of proper, or of properly prepared, food is, where it exists, a piece of unpardonable neglect.

IN a paper contributed to the last annual meeting of the Sanitary Institute, Surgeon-Major BLACK discusses the meteorology of the seaside, a topic which may appropriately engage our attention at the present season. His observations were conducted at Brighton, Hastings, Havre, and Boulogne, and his general conclusion is that the climate of the English Channel seaboard as compared with that of London is characterised by "more ozone, more breezes, more showers, more sun and air, and less heat, less calms, less smoke, and less miasmata." Ozone was found to be most abundant in the mornings during the prevalence of south-westerly winds, but in settled weather there was more ozone in the afternoons, as the ordinary sea-breezes spring up at that time after mild mornings. Evaporation was found to be more active on the coast than inland, as might be expected from the prevalence of wind. The general breeziness of the coast climate was strongly borne out by the observations. There were seventy-seven mornings and seventy-eight afternoons with some wind, as compared with eight calm mornings and seven calm evenings. The most prevalent wind was that from the south-west, the next in frequency being northerly winds, characteristic of anti-

cyclonic weather, and westerly winds, which were most frequent after the subsidence of the equinoctial gales.

As regards the various localities at which the experiments were conducted, Dr. BLACK found that Brighton excelled in the dryness of its air, owing, no doubt, to its southerly aspect and the reflection of heat from the chalk cliffs and downs; Havre was found to have some deficiency in ozone, owing to its being a large commercial port, and the air was damper than at Brighton; Boulogne and Folkestone were found to resemble Havre rather than Brighton. As Dr. BLACK'S observations were conducted with such instruments as can be carried in an ordinary handbag, and as he disclaims perfect scientific accuracy for his results, we are compelled to accept them with some reserve. Mr. SYMONS pointed out in the course of the discussion that the conclusions of the observer as regards evaporation were untenable, and remarked upon the extreme difficulty of attaining anything approaching precision on this subject, since the size of the vessel containing the water was found to exercise a very great influence upon the amount of evaporation. Thus the amount of evaporation from small vessels was found to be two or three times as great in proportion as the evaporation from large vessels. The water in small vessels had been known to become heated to as much as 95° F., whereas no large surface of water could rise to such a temperature.

The general character of the marine climate is tonic. The large amount of sunshine and ozone, the prevalence of wind, and the activity of evaporation all seem to promote tissue change and to stimulate the organism. From the therapeutic point of view, allowance must also be made for the alteration in habit and daily routine which generally are associated with change to the seaside. The individual, on resorting to the coast, commonly spends a much larger amount of time than usual in the open air, he indulges in boating or pedestrianism, he adopts earlier hours than have been habitual, and he lays aside to some extent the pressure of daily cares. These coöperate with the stimulation of the climate to promote appetite, and digestion, and encourage sleep. The cardinal principle in this case, as in all similar questions of medical climatology, is to consider whether the individual is in a condition to bear stimulation. If through any cause—such as feverishness, extreme debility, acute insomnia, or severe dyspepsia—stimulation is likely to prove hurtful and a sedative environment is demanded, the seaside is in general unsuitable, although the various marine resorts differ very notably in the amount of stimulation which they afford.

Dr. BLACK discusses at some length the question of sea-bathing, and lays down the general rule that "warmth of sea-water above 60° is found to be comfortable, and below that may become disagreeable to some people; but that anything above 50° may be tolerated perfectly by swimmers who enjoy a cool and refreshing plunge in open water." He also remarks that it is not so much the increasing coldness of the water which cuts short the bathing season in September, as the rapid increase of coldness and rawness in the air which characterises the British autumn. That the month of September is a very agreeable one for bathing, provided the weather continue fairly settled, is a matter of common observation, and the superiority of this month to the spring months in this matter is very marked. The temperature of the sea retains its initial heat for some time after that of the air has fallen, and generally gives way in the English Channel only after northerly gales have brought down cold currents from the German Ocean.

No general law regarding the amount of rainfall at the seaside can be laid down. Everything depends upon the direction of the prevailing winds and the configuration of the coast. If the prevailing winds are sea-breezes, and especially if they come from warmer to colder latitudes, and if the coast be mountainous, then the rainfall will be very heavy. If, on the other hand, land-breezes or sea-breezes coming from colder to warmer latitudes prevail, and if the coast be flat, then the rainfall will be relatively small. For the purposes of the invalid, it is very important to note not only the total precipitation of rain but the number of rainy days. A heavy rainfall occurring on a few days is evidently a much slighter impediment to out-door life than a long succession of showery and cloudy days. Not long ago claims were put forward for Buxton as an elevated resort for sufferers from phthisis in winter. When the fact is known that at that resort, which possesses so many advantages in summer, rain falls at short intervals in winter, its unsuitability for such patients at that time of year becomes at once evident.

Dr. BLACK'S observations are, in the main, very favourable to our south coast resorts, and show that in Brighton, Hastings, and Folkestone (to which might be added a long list of marine resorts, from Redcar and Whitby on the north-east to Ilfracombe and Tenby on the west), we possess a series of watering-places such as few countries can rival and none surpass.

WHAT with the investigations of the Lords' Committee into Hospitals—in which everybody that has a fad, or a fancy, or a fault to find, not to say a spite to vent, seems to see his chance—and the inquiry at Birmingham into alleged hospital abuses, the subject of hospital reform is undoubtedly a burning one. It is not likely that for many years such another opportunity will offer for doing real good in reforming hospital administration, and in adjusting the claims of poverty with the general demand of society that charities shall not be used so as to foster pauperism. Our hospitals, so far at least, are voluntary institutions, supported, not by extorted rates, but by willing contributions, and the subscribers have them in their own power. They are mainly responsible for their abuse, and cannot free themselves of the responsibility. There is another class that is responsible for the abuse of hospitals, and that is the medical staffs by which they are served. Hospitals would be nothing at all, if it were not for the notion that their honorary medical officers are men of superior qualification. It may be that they are met by two or three temptations to ignore the abuse of hospitals. First, they are more interested in the medical *cases* than in the social fitness of the patients; secondly, they are either men of established position, independent of the classes that constitute the hospital patients, or men with a reputation to make, and not unwilling to have a large basis for it in the cases that crowd the out-patient room; thirdly,

they are largely medical teachers, and want common cases as well as classical ones for teaching purposes. It is becoming more and more apparent that the educational "interest" has to be reckoned with in this question, and is a main obstacle to reform. From this point of view, private practice is no school for students; they must learn everything in hospitals and from hospital physicians and surgeons. Another point is that consulting surgeons often take a case into hospital rather than operate for a fee which would be inconsistent with their dignity, though within the means of the patient, and one that many a surgeon without a hospital appointment would be thankful for. This is an abuse of hospitals. We are far from saying that these are the views of every physician and surgeon looked at from the vantage ground of a hospital appointment. But they are views more or less consciously held by consulting and hospital practitioners—and not unnaturally, perhaps, from their standpoint. Opposed to these is the commonly held opinion of the general practitioner that hospitals should be reserved for exceptional cases, and that all ordinary cases should be kept out of hospitals on every ground, medical and moral, for the sake of the patient, the public, and the practitioner. They regard the wholesale attraction of hundreds of thousands to the hospitals as an outrageous abuse of charity and a monstrous injury to the general practitioner, as destructive of that relationship between the family of a working man and a regular medical adviser of his own choice and in his own neighbourhood which is so conducive to the benefit of both, and which is perfectly practicable as regards the wage-earning class, either in the way of ordinary private practice or through the medium of clubs or of provident dispensaries. They deny that any sound system of medical education can require such developments of the out-patient system.

It is perhaps a fortunate circumstance that the meeting of the British Medical Association at Birmingham should coincide, both as to time and place, with a very interesting attempt to get at the merits of the hospital system, and to elucidate the abuses of it. Both classes of the profession—the consulting section, who enjoy the advantage of hospital position, and the general practitioners, who suffer from the unequal competition of hospitals with their gratuitous terms or petty fees—will meet at Birmingham. And no use of the meeting could be better than a frank and dignified discussion of differences which are really serious. Even all general practitioners are not agreed as to the best way of meeting the case of the working classes, who obviously cannot pay large bills, but as obviously can pay moderate charges either under a provident or a private system. If the profession does not pull together at this crisis, or if it fails to show the practicability of attending the working classes on terms consistent with the self-respect of the medical man and the working man alike, a great opportunity will be lost and permanent harm may be done to the profession. Birmingham medical men themselves can well raise this discussion. We have before us the evidence of one of their number, Dr. SIMON, which contains much that is to the point, and the views expressed in which would serve as an admirable basis for a practical discussion and for the reconciliation of the two conflicting views of the profession which threaten to weaken its influence at the present crisis. Dr. SIMON gave statistics of the diseases of the 15,000 out-patients at the General Hospital, Birmingham, in the course of a year. Of this number, 6000 were treated for diarrhœa, 1500 for dyspepsia, 1000 for debility and anæmia, and about 1000 for bronchitis and catarrh. The majority of the cases might have been successfully treated by any qualified practitioner. Many of the patients seen by Dr. SIMON with a little providence on their part would not have needed to go to a hospital. As for the reputation acquired by a hospital physician, he thought it could be as well secured by seeing 500 patients as 5000. He was of opinion that if the enormous number of cases going to the hospitals was distributed among practitioners the conditions of practice would be altered. Mr. SAUNDERS asked Dr. SIMON what he thought of the case of a man with 30*s.* a week and eleven children. Dr. SIMON considered he could afford to pay to a provident dispensary. Many such men, who love their families, pay, and can command the best practitioners day or night by their honesty. The case is a rare one, and it must be remembered that the eleven children are not all on his hands, and that medical men are considerate—prizing patients, not for what they can pay but for their paying what they can cheerfully. We repeat that the occasion is fit for a grave discussion. It is unjustifiable to abuse hospitals so long as they restrict themselves to their high functions. But no true friend of hospitals will defend their catering for the common wants of the working classes, and it is safe to prophesy that if they continue to do so subscriptions will diminish.

MEDICINE, like all culture, has its roots in the East, but it found its earliest, most congenial soil in the Nile Valley. Its growth tended more and more westward, till, by natural selection, it chose the Greek cities and islands of Asia Minor as its proper habitat, and there, under the fostering care of HIPPOCRATES and his school, it attained the stature and development which are even yet the admiration of posterity.

Not, however, that it had not an eastward radiation as well. In Assyria, Persia, India, the influence of its Egyptian paternity is only less apparent than in Ionian Greece. And now, thanks to medico-missionary coöperation, we find China to have shared in the stimulus that diffused itself from the Nile Valley, and to have reached considerable advancement in the various branches of the healing art.

As in every other centre of civilisation, surgery took the start of medicine, as being more obvious to the eye and the touch and less shrouded by the Unseen. The surgical processes, however, were of the unloveliest description, involving the maximum of suffering to the patient, and, when successful, leaving him maimed and even repulsive to his fellows. Bloodletting seems to have been seldom resorted to, while, on the other hand, acupuncture and the moxa were used with skill and effect. But the study of the pulse was the *prima cura* of the Chinese practitioner, and under the *tactus eruditus* of the physician it developed into such hair-splitting complexity as to render the mastery of it the work of a lifetime. Next in importance and in wealth of subdivision came the Pharmacopœia, a prodigious storehouse of remedies and specifics. Among these the Ginseng-

root (Panax quinquefolia) was the most celebrated, and not only in China but in Chinese Tartary its virtues were in high request, most probably for their aphrodisiac power.

The hero and eponymus of Chinese medicine was PIEN-TSIO, who flourished between the eighth and sixth centuries before CHRIST. He was the great proficient in pulse-discrimination, and when in attendance on a prince who had for five days been in an unconscious condition, he formed his diagnosis and his treatment by his observation of the pulse. Much that is told of him and his achievements is plainly fabulous, the skilled physician in those regions and times lending himself peculiarly to the mythopœic spirit. The medical classics of the Chinese, however, the Soo wên and the Ling ch'ao, bring us to scientific ground when the healing art had shaken itself free of the exorcist and magician, and when the germs of nature-study and rational theory are apparent. In the curious medley of half truths and premature generalisations that make up the bulk of these books we can detect the influence of that western knowledge which, imperfectly appreciated, had radiated eastward in the fifth, fourth, and third centuries before CHRIST, and which, even in its travesty or partial disguise, betrays its Egyptian origin.

To the medico-missionary service, which has few abler or more enlightened representatives than those in China, we may now look for a thorough and scientific account of Chinese medicine. Twenty of these gentlemen have lately been in conference on subjects relating to their special calling, and among them there are scholars as well as physicians who have every qualification for the research on which the history of the healing art in China must be based. It is impossible to exaggerate the interest of such a work, contributing, as it must do, a most instructive side-light on the rise and progress of medicine in a strongly marked civilisation. Concurrently with European investigation, the rising school of Chinese physicians may be expected to coöperate, and the fusion of the two forces must eventuate in results of permanent value to universal science. The Chinese have shown themselves eager and apt pupils, now as in old time, of western culture, and the history of their adoption and practice of vaccination alone speaks volumes for their power of assimilating and turning to account the intellectual yield of the newer civilisation. Not that the benefit will be all on one side. When risen to full stature and independence, Chinese medicine will advance to original work, and will furnish to the main body of medical doctrine and practice a contingent of native observation and induction which must reinforce the power and efficacy of that profession whose "field" is pre-eminently "the world."

AT the meeting of the inhabitants of Chelsea, on the 16th inst., a resolution emphasising the necessity of keeping the old Physic Garden on the Chelsea Embankment "as an open space for public uses" was carried, and the advantages of such spaces in our great cities were eloquently dwelt on. We have already expressed our full sympathy with the speakers and the dwellers in the immediate neighbourhood, but must point out that there is another consideration to be taken into account. Sir HANS SLOANE, in 1721, presented the land to the Apothecaries' Company, not to preserve an open space merely, but that "it should at all times be continued a physic garden for the manifestation of the power and wisdom and goodness of GOD in creation, and that the apprentices might learn to distinguish good and useful plants from hurtful ones." The Apothecaries' Company has hitherto faithfully fulfilled its trust, the medical part of the old garden has been well maintained, and every student who had any wish to study general or medical botany was welcome to visit it and stay as long as he pleased. Recently botany has disappeared from the curriculum of many professional examinations, and systematic botany has been banished from the courses of lectures in most medical schools; but still, for other examinations a certain amount of systematic botany is required, and forensic medicine can scarcely be thoroughly taught or made the subject of examination unless a knowledge of poisonous plants in their fresh condition is included therein. Moreover, there are yet some students who, from motives of scientific or useful curiosity, are anxious that their opportunity of "learning to distinguish good and useful plants from hurtful ones" should not be taken away. Most universities provide physic or botanical gardens for this purpose, and we can hardly believe that London is about to lose the only public one it possesses. The Royal Botanic Society kindly admits students to the privileges of its gardens in Regent's Park, but there is no obligation on a private society to admit students, or on its Fellows to maintain a collection of plants arranged according to a systematic classification. A student is not allowed to remain in these gardens after midday. A public physic garden for medical and pharmaceutical students is still an obvious necessity, and a public body cannot forego a public trust because the objects of that trust are partly fulfilled by a private society. The expense of maintaining the old physic garden is said to be £600 a year, and surely the Apothecaries' Society can afford to dedicate this small portion of the fees received for examining medical students to keeping it up in its present condition. If it cannot, the reversion of the opportunity of maintaining the garden passes, by Sir HANS SLOANE'S will, to the Royal College of Physicians and then to the Royal Society; but we understand that these bodies have declined the offer, failing to find any adequate reason why the Apothecaries' Society should be relieved of the duty which it has so well carried out for more than a century and a half. The taking over of the expense of its preservation and keeping it as an "open space" for Chelsea by Lord CADOGAN and his neighbours cannot but unfit it for the primary use for which the founder presented the site. If it be true that the sum of £30,000, which has been mentioned as the value of the land for building purposes, is proving attractive to the Court of Assistants of the Apothecaries' Company, it will be incumbent on the other interested bodies to see that the site is not sold without their rights being recognised, and the Society should then be compelled to form and maintain a "physic garden" elsewhere. Probably this would cost quite as much as is now expended on the present garden, and if the Apothecaries' Society can be made to spend any funds derived from its trust in so doing, we question if any

further steps towards the sale would be taken. If the Apothecaries' Society is unable to afford £600 per annum, it should apply for assistance to the other bodies who hold a reversionary interest, the Royal College of Physicians and the Royal Society.

Annotations.

"Ne quid nimis."

THE ROYAL COLLEGES AND THE UNIVERSITY OF LONDON.

AN Extraordinary Comitia of the Royal College of Physicians has been summoned for Monday next "to consider certain difficulties that have arisen with the College of Surgeons on the report of the delegates of the two Colleges adopted by the College at the Comitia on the 9th inst." The Council of the Royal College of Surgeons is also summoned to consider the same question on the same day. The decision of the two Colleges on Monday will be the turning point of the whole scheme, so far as the Faculty of Medicine is concerned, and the responsibility evidently rests with the Royal College of Surgeons. It is understood that the Council of that body objects to such an intimate union with the University of London as the scheme necessarily involves, but wishes to control the examinations for the pass M.B. degrees by an external joint committee of the two Royal Colleges and the University. It is obvious that no University can allow its degrees to be conferred after examinations controlled by a body partly composed of non-University representatives; and University and King's Colleges, recognising this, have agreed to send their representatives to the Senate of the reconstituted University, so that they may be placed on the Standing Committees in the Faculties of Arts and Science. In a similar spirit the Fellows of the Royal College of Physicians are willing, by sending representatives to the Senate, to co-operate in forming a Standing Committee of the Senate for the Faculty of Medicine, so as to secure an organic and constitutional connexion with the new University, and also to provide for an efficient representation of the whole Faculty of Medicine of London in the counsels of the University. It need not be pointed out which is the wiser and more statesmanlike course of proceeding. If the Council of the College of Surgeons persists in keeping aloof from the Senate of the reconstituted University, the scheme of forming a special Standing Committee of the Senate in the Faculty of Medicine to supervise and arrange the examinations for the pass M.B. degree of the University will probably be abandoned, and the present state of chaos in medical examinations in London will be perpetuated. The teaching Colleges are pressing the Senate of the University to hasten the progress of the scheme, as they purpose to seek another interview shortly with the Lord President of the Council, and are hopeful of informing him that an agreement has been arranged between them and the Senate, and if possible Convocation also. They say that, since the Senate has insisted, against their wishes, upon a separate treatment of the medical question, the important interests of their two Colleges, and of London education in the Faculties of Arts and Science, should no longer be postponed until after the settlement of the many difficulties raised in respect to the Medical Faculty.

THE ARMY MEDICAL SERVICE.

ON Monday last Mr. Stanhope received a deputation, organised under the auspices of the Royal College of Physicians, and comprising representatives from every one of the medical corporations in the United Kingdom. The purpose of the deputation was to bring specially to the notice of the Secretary of State for War the grievances of the Army medical officers, the injustice with which they were treated in the refusal to carry out the recommendations of Lord Camperdown's Committee, and the consequences to the army which would inevitably follow such a course. We understand the case was very clearly and forcibly stated by Sir Andrew Clark. The usual answer to such deputations was given, that the matter would receive the serious consideration of the Minister. But we think there is evidence to show that the statements submitted to him made a considerable impression on Mr. Stanhope. On Tuesday, when the vote for the medical establishments came on, he made an appeal to Dr. Farquharson not to press a discussion on the subject at that moment, as he had promised to give the matter his serious consideration, and it would be impossible for him to make a statement on the subject. To this appeal for delay Dr. Farquharson acceded, and progress was reported. Sir W. Foster appealed to the leader of the House to find some day next week for the discussion of this important subject, and Mr. Smith asked time for consideration. We sincerely trust that before the vote is again brought forward Mr. Stanhope will have realised the necessity of conceding to the medical officers the greater part at least of the changes recommended by his own committee, and that he will not allow himself to be persuaded by his "military advisers" to ignore the just claims of a large body of officers merely in deference to the "military instincts" of the Staff at the Horse Guards. On Monday last Dr. Farquharson elicited from Mr. Stanhope a statement which surely ought to carry great weight in the consideration of the claims of medical officers. It was that the death-rate of medical officers, compared with the so-called combatant officers, at the same ages, in the twenty years 1852–71 was 497·7 as against 335·2 in 1000, or nearly three to two. In the appendix to the report of Lord Camperdown's committee a table is given for the twenty years 1868–87, which fully bears out these results. The annual death-rate of the medical staff for that period was 14·63, while that of officers of the line was 10·48 per 1000. Evidently the battle with disease is more destructive than that to which the combatant officer is exposed.

THE AMENDED MIDWIVES' REGISTRATION BILL.

WE have been favoured with a copy of the Midwives Bill as amended by the Select Committee. The amendments are considerable, and on the whole are improvements. The regulation of all that respects the education and examination of midwives—not the examinations themselves, however, or their inspection—is devolved in the first instance on the General Medical Council, subject to the approval of the Privy Council. If the General Council fail to make such regulations, the Privy Council is empowered to make the necessary regulations. The absurd clause giving right to recover for "operations" does not appear, and Clause 6 makes it clear that the certificate to be granted *entitles a woman to act as a midwife in cases of natural labour only*. Clause 9 provides for the registration of existing midwives. It runs thus: "Every woman who at the passing of this Act is *bonâ fide* acting as midwife, or has served as a pupil midwife in some hospital or other public institution, and claims to be registered before the expiration of eighteen months after the passing of this Act, and produces the prescribed evidence of her title to be so registered, shall be entitled at any time thereafter to present herself for examination under this Act, at such reduced rate of fee as the Privy Council may prescribe." This clause is not strict enough. What constitutes acting *bonâ fide* as a midwife? Who is to certify the prac-

tice? Elsewhere to-day we record the opinion of a jury that legislation is necessary to prevent ignorant women from practising as midwives. It comes most opportunely to be regarded by the promoters of this Bill. But the above clause will scarcely effect this important result. We would suggest that evidence of having practised for a certain length of time, coupled with certificates of efficiency from registered medical practitioners should be required. We do not notice in the Act any provision for securing the proper discipline of midwives—which we take to be a very important matter. The first clause, which gives power to the Medical Council to frame regulations for setting examinations, should give it the power of providing for the exercise of proper discipline over midwives when registered, probably by the examiners to be appointed, or by the County Councils who are to appoint the examiners.

PROPOSED SCHOOL OF MEDICINE AT CARDIFF.

A MEETING of Welshmen in London was held on Wednesday, the 23rd inst., at the rooms of the Royal Medical and Chirurgical Society in Hanover-square, in support of the movement for establishing a school of medicine in Cardiff in connexion with the University College of South Wales. Lord Aberdare, the Vice-President of the College, who presided, and was supported by Principal Jones, Sir Wm. Roberts, Dr. F. Roberts, Dr. Edwards, and Dr. Price, of Cardiff, explained the aims of the promoters of the scheme. The University College of Cardiff has been increasing in a marked degree since its foundation in 1883, and, with the exception of a medical faculty, its organisation will be complete in October next. Its pupils have been very successful in passing the matriculation and preliminary scientific M.B. examinations of the University of London, and it is now intended to establish chairs in Human Anatomy, Physiology, and Materia Medica, so that students may pass the Intermediate M.B. degree direct from the College. Practical instruction in the elements of medicine and surgery can be given at the Cardiff Infirmary. Obviously, the new institution is desirous of emulating the older Universities of Oxford and Cambridge by giving a thoroughly good and complete literary and scientific education to such of its students as are destined for the medical profession, and there is no reason why Cardiff should not do this good work as well as the present centres of medical education. So long as the scheme remains in its present modest state it will work well, but its promoters must strenuously resist any attempt to widen its scope, for thorough clinical experience can only be satisfactorily obtained in the largest fields. We would urge upon the authorities of the College the further consideration that, for the proper establishment and efficient working of a medical faculty, endowments for the teachers of human anatomy and physiology are as essential as the provision and equipment of a dissecting-room and a laboratory.

CHOLERA INTELLIGENCE.

DETAILED cholera intelligence from Spain has come to an end during the past week, but Dr. Proust of Paris, speaking in his official capacity, declares that the disease still prevails in certain portions of the province of Valencia. We also learn from the French capital that no case of cholera has occurred in France this year, and that the Consultative Committee of Public Health have so modified their disinfective regulations on the Pyrenean frontier as to bring them within the lines of reason. The absurd proposal to disinfect people and letters has apparently been abandoned, and the process is now to be essentially limited to dirty linen, or to articles calling especially for suspicion. From Asia Minor news comes that cholera, which has recurred with severity this year in certain parts of Mesopotamia, has travelled northward in the direction of Lake Van, and westwards towards Diarbekr, thus threatening the trade routes opening on to the southern coast of the Black Sea and those in the Levant. One rumour from Paris appears to be groundless. It is to the effect that there is cholera at Camaran, on the Red Sea. So far as we are able to learn, the rumour is based on the circumstance that some forty cholera deaths having occurred on board a ship conveying pilgrims to Mecca, the remainder of the passengers and crew were placed in quarantine by the Turkish Government at the place named, with a view to their being kept under observation whilst the ship was disinfected.

THE NIGHTINGALE FUND.

FROM the statement issued by the secretary of the Nightingale Fund Committee, in his report for the year 1889, it appears there were 40 probationer nurses admitted into the training school or Nightingale Home at St. Thomas's Hospital during the year, making, with those remaining from 1888, 71 who were under training. Of those admitted during the year, 12 resigned, or were discharged as unsuitable for the work; 26 completed their year's training, and were entered on the register of certified nurses. Of these, 8 were special probationers, and 18 nurse probationers. The annual gratuity of £2, allowed by the regulations for the term of three years to the certified nurses who have completed a year's service satisfactorily in some approved hospital or other institution for the benefit of the sick poor, was awarded to 69 nurses. A list of the appointments which have been received by former probationer nurses is given, and includes the names of hospitals in various parts of the country. From the opening of the school in June, 1860, to the end of 1889, a total of 1005 candidates have been admitted, and 602 have, after completing a year's training, received appointments in some institution for the benefit of the sick poor. During the year Miss Gordon was appointed matron of the hospital and superintendent of the Home, in succession to Miss Pringle. The medical report of the health of the Home is to the effect that there were no cases of serious illness, with the exception of one attack of typhoid fever, which terminated favourably. At the end of 1889 the nursing staff of St. Thomas's Hospital and Home comprised 85 certified nurses, former pupils of the school. At the St. Marylebone Infirmary, which is a branch of the St. Thomas's School, 15 probationers had completed their year's training and received appointments in the infirmary. It is of interest to note that the special probationers contribute £351 10*s.* to the funds of the school. The expenses of training hospital nurses at the hospital amount to £1514 2*s.* 10*d.*, and a contribution of £169 15*s.* is made to the expenses of the training school at the St. Marylebone New Infirmary; these, with other expenditure, leave the fund with a balance in hand of £776 12*s.* 8*d.*

GLANDERS MASKED BY CATARRHAL PNEUMONIA.

DR. HARTGE, writing in the *St. Petersburger Medicinische Wochenschrift*, gives an account of the case of a veterinary surgeon who had been engaged in treating horses for glanders, and had subsequently worked in the laboratory of the Dorpat Veterinary Institute at bacteriological investigations of this disease. During last November, while he was working in the laboratory, he had an attack of influenza which kept him three days in bed, and which was followed by a severe and persistent cough, for which he was advised to keep in-doors. He did not follow this advice, and about three weeks after having returned to work was seized with a rigor and a feeling of discomfort in the chest, which was followed by stabbing pains

in the side. On examination he was found to be suffering from bronchitis and catarrhal pneumonia, which were supposed to be consequences of the influenza. There was then no albuminuria, and the temperature was not more than a degree above normal. On the sixth day, however, a considerable quantity of albumen was found in the urine, and the temperature was 40·6°. On the seventh day the lungs still appeared to be affected with capillary bronchitis. There was little cough, but the sputum was tinged with blood. The patient now began to complain of severe pain in the joints of the feet, which were tender, but no swelling could be detected. The next day the knees became painful, and a slight swelling could be detected around the ankle-joint, which was excessively painful; some small red eminences appeared in the neighbourhood similar to those of erythema nodosum, and the knee-joint was swollen and distended with fluid. The next day (the ninth) the patient was generally worse, and there was dyspnœa, but it was not until the tenth day that the infectious nature of the disease was suspected. The raised spots became livid, and there were streaks of lymphangitic character about the feet. The nose and face became red and swollen, and there was a sanguineo-serous nasal discharge. The diagnosis was fully cleared up on the examination of this discharge at the Veterinary Institute by the detection in it of Löffler's glanders bacilli. The next day pustules broke out in various parts, and great numbers of Löffler's bacilli were found in the pus contained in them, with a remarkable absence of other micro-organisms. The patient died on the twelfth day. A post-mortem examination could not be obtained. Dr. Hartge remarks upon the difficulties of diagnosis which glanders frequently presents. At first the symptoms are so little distinctive that diagnosis is usually impossible; subsequently they may be mistaken for those of pyæmia, and in chronic cases for those of syphilis or tuberculosis. In the present case the nature of the disease was masked by the catarrhal pneumonia which was present. The true proof of course is the detection of the glanders bacilli of Löffler and Schütz. In this case not only were these found, but guinea-pigs and mice which were inoculated with the nasal discharge became affected by the disease. In acute cases, according to Dr. Hartge, the prognosis is always bad; in chronic cases about 50 per cent. recover. The incubation stage is generally from three to five days, but may last longer.

THE LEGAL CONTROL OF VICE.

THOUGH it has been truly said that Acts of Parliament cannot instil the principles of morality, there is reason as well as right in seeking to control by law practices which of necessity set those principles at defiance. This, in brief, constitutes the justification of such work as is carried on by the Charing-cross Vigilance and Rescue Committee. We are pleased to learn from the last report of the committee that their efforts in the way of reclamation have so far been distinctly successful. The details given of this branch of their work leave no room to doubt that a certain proportion of outcast women can always be relied upon to forsake their vicious habits, if only some other means of livelihood be afforded them. During the past year eighty-three such women have availed themselves of the temporary home provided by this Society, and of these only twelve have proved unsatisfactory in their after-conduct. Of equal utility with its restorative exertions is the zeal exercised by the Society in securing the detection and closure of houses of ill-fame. In this sphere of activity it has, we observe, received on more than one occasion the support of local vestries. Notably is this the case in the parish of St. James, where a joint committee has vigorously opposed the maintenance of such establishments, and has obtained many convictions. Among the difficulties which have been met with in the work of repression is that of detecting vicious practices carried on under cover of hotel privileges, and of inducing landlords to refuse the high rental commonly offered by persons of dubious character. An observation on the evil and impolicy of permitting the unrestrained influx of known profligates from abroad might be noted with advantage by our legislators. The inducements to vice afforded by much that passes for harmless amusement is another matter which ought not to be overlooked. It is clear, therefore, that so far the efforts of the committee have been most useful, and that they are worthy of wider and fuller recognition than they have yet received.

A QUINQUENNIAL CENSUS.

A VERY general feeling of regret and disappointment will be felt by all who are interested in sanitary progress at the action of the Government in ignoring the distinct recommendation of the Census Committee, that the Act for the Census in 1891 should give power to take an intermediate enumeration of the number, sex, and age of the population between the usual decennial censuses. This disappointment is only partially compensated by the distinct recognition of the value of a quinquennial enumeration on the part of the Government, and generally by the House of Commons, made during the debate on the second reading of the Census Bill on Monday evening last. It is impossible to feel very sanguine that before 1896, when this quinquennial enumeration will be due, measures will have been taken for securing this intermediate census, the necessity for which, in the interest of trustworthy mortality statistics, and consequently of sanitary progress, is now so generally recognised. We can only hope that the importance of this subject and its intimate connexion with the well-being and progressive welfare of the community will not be lost sight of, because for a year or two the results of the census of 1891 will temporarily remove the difficulties of our unknown population, which are just now to a great extent destroying the value of the reports of our medical officers of health and paralysing their influence upon sanitary authorities.

SUCCESSFUL OPERATION FOR ACTINOMYCOSIS.

DR. MATLAKOWSKI of Warsaw reports an interesting case of actinomycosis in a man which was successfully eradicated by operative measures. The patient, who was engaged in agricultural pursuits, was forty-six years of age, and had noticed for six weeks a rounded, movable tumour, which did not cause him any pain, under the angle of the jaw on the right side. He had been losing the teeth for the last fourteen years, they having fallen out without being carious. The last tooth in the right lower jaw had fallen out a year before. The tumour kept on increasing, and a week before admission a small abscess had broken. Not only was there no pain, but there was no difficulty in opening the mouth or in swallowing. When first examined, there were two fistulous openings near the angle of the jaw, but a probe passed into them did not penetrate at all deeply, and could not be made to reach the bone; a considerable quantity of blood exuded in consequence of the probing. The discharge was scanty, and looked like boiled sago mingled with bloody serum. The molars and canines were all wanting in the lower jaw on the affected side, the gum, which was healthy enough, having grown over their alveoli. The ray fungus having been found on microscopical examination, and there being a complete absence of any signs of disease elsewhere, an operation was decided on. Ample incisions having been made, parts of the masseter, digastric and sterno-

mastoid, and the whole of the mylohyoid muscles were excised, together with the entire submaxillary gland and the lower part of the parotid, also the bridge of salivary gland substance connecting the two glands. A large number of arteries and veins had to be ligatured. At first the patient experienced some difficulty in swallowing, and in expectorating a quantity of tenacious and somewhat sanguinolent mucus, for the existence of which no physical cause could be found by examination of the lungs. However, after a time all these difficulties passed off, and the wound, which was of course a large gaping cavity in consequence of the quantity of tissue that had been extirpated, granulated up and healed over. Two years and a half afterwards Dr. Matlakowski obtained information that the patient continued in good health.

PUFFING QUACKS.

WE notice in a recent impression of a highly respectable provincial daily paper a paragraph puffing the art of an "Indian Eye doctor," at present residing in a fashionable sea coast town. Of quacks and their ways it is bootless to complain. The indulgent provisions of our criminal law leave them a province which they are free to occupy with considerable profit to themselves, and this being so, it is only natural that they should avail themselves of their opportunities. Nor is it surprising to find that what may be called quack journals should be prepared to offer them facilities for the boldest and most effective forms of advertisement. But with self-respecting journalists the case ought to be different. In the paragraph to which we refer we read, "The plan of publishing both names and addresses of healed persons is a guarantee of good faith that should have influence among afflicted persons whose objection to this popular form of medical treatment is a barrier to their recovery." It is not easy to believe that the editor who admitted this passage to the columns of his paper is really so unfamiliar with the ways of unqualified "doctors" as to believe that there is any more difficulty in compiling lists of patients than in procuring names for a petition to Parliament. The criticisms of a Parliamentary Committee do let in an occasional ray of light upon the ways of the petition fabricator; but, unfortunately, nobody—not even a committee—is charged with the duty of exposing the artifices of the advertising quack. Still, this circumstance does not exonerate the journalist. Not only self-respect, but even the lowliest view of public duty, should deter those who would scorn to practise for their own direct advantage on the ignorance and credulity of mankind from aiding and abetting their customers by recommendations which must be either heedless or insincere.

REPORT ON THE CIVIL HOSPITALS OF THE STRAITS SETTLEMENTS.

THE annual medical report by Mr. M. F. Simon (acting principal civil medical officer) of this branch of the service has been published for the year 1889. It sets forth the condition of the health of the Settlements of Singapore, Penang, Province Wellesley, and Malacca; and notes the arrangements for hospitals—general, pauper, military, and special—that obtain in these parts of Her Majesty's dominions. The report shows that the authorities are evidently taking stringent measures, by instituting prosecutions &c., to enforce the isolation of and to prevent the importation of cases of infectious diseases. Notwithstanding this, however, from the habits of the native population and other causes, it appears that at some of the Settlements the most virulent and destructive of these affections have not been wanting. Cholera, small-pox, and enteric fever have largely increased the death-roll, although the necessity of careful storing and using of water for drinking purposes has been insisted upon by the responsible medical officers. A notable point in the report refers to the abolition of the Contagious Diseases Ordinance in these districts, the effect of which has been manifested by the increase both in number and severity of cases of venereal disease in hospitals of all kinds in the Settlements. It seems that very little has been done in the hospitals for women to avert the disastrous consequences arising from imperfect legal examination of women, and the condition of things leaves much to be desired. Regarding vaccination, it is satisfactory to note the encouraging nature of the reports. The lunatic asylums show an increased amount and variety of work. One of the difficulties in the Straits Settlements arises from the lack of sufficient assistance in accomplishing the work. It has been difficult to procure men either from India or Ceylon. So much has this difficulty been felt that a scheme to open a medical school at Singapore with a view of obviating it is now under consideration. The most interesting feature of this year's report of the Pauper Hospital at Singapore is the unusually large number of admissions into hospital, 90 per cent. of which were Chinese. The death-rate, however, remains very low, the most frequent causes of death being old age, dysentery, and beri-beri. In the Leper Hospital of Pulau Jerejak, Mr. McClosky, colonial surgeon, reports the average daily number of inmates as 174, and refers to the practice of selecting suitable cases for special treatment with the Gurjon, Chaulmogra, and Kachang oils. The results of his observations have tended to the belief that in his opinion, though these medicines serve to prolong life, to alleviate suffering, and not unfrequently to check exacerbations of the disease, especially in its incipient stage, strict segregation is the only way of dealing with the disease. Mr. Colston's report says: "Beri-beri, I think, will always be in our midst. The deaths from it amounted to 225. The Chinese seem to be the only nation attacked, and the majority of cases come from tapioca and gambier plantations and tin mines."

SUGAR IN THE BLOOD.

THE condition known as mellitæmia, or the presence of sugar in the blood, has long been recognised. Pavy, Ewald, Seegen, and Otto have demonstrated beyond doubt that sugar is a normal constituent of the blood, although it is present only in very small proportions; the quantity is not altered when the blood is analysed after death. The proportion of sugar in the blood is considerably raised in cases of diabetes. In 1885 Freund examined the blood of seventy patients suffering from carcinoma, and found it to contain a large quantity of sugar, but he was unable to detect it in cases of sarcoma. Freund's experiments have not been fully verified by other observers. In the *Centralblatt für die Medicinischen Wissenschaften*, 1890, No. 25, Trinkler gives an interesting account of a series of observations he has made as regards the amount of sugar contained in the blood in various diseases. He examined the blood of 109 patients, and the investigation fell into two classes: 1. Quantitative estimation of sugar and reducing substances in the blood during life, the quantity of blood required being obtained during the performance of operations. 2. In which the greater number of analyses took place after death. The diseases from which the patients were suffering were carcinoma, typhoid fever, pneumonia, morbus cordis, dysentery, peritonitis, nephritis, uræmia, &c. Sugar was found to be present in all the cases. In carcinoma the amount was very large, next came typhoid fever and pneumonia, whilst nephritis and uræmia exhibited the least. In the case of carcinoma, the following conclusions could be drawn. 1. The blood of patients suffering from carcinoma always contained a considerable percentage of reducing substances, of which

the chief was grape sugar. 2. The maximum percentage of sugar in the blood of living patients was less than the maximum obtained after death. 3. Carcinoma affecting the internal organs produced a greater quantity of sugar than when attacking superficial structures (skin, mucous membranes). 4. The degree of cachexia stood in no direct proportion to the percentage of sugar in the blood. The quantity of sugar in acute pneumonia, typhoid fever, and dysentery was about the same, and very little above the normal; whilst in nephritis, and especially in uræmic conditions, the quantity was below the normal.

DRINKING AMONG ENGLISH WOMEN.

AN American writer in *Harper's Magazine* gives a sad account of what he alleges he saw in England of drinking by women. The bar-rooms, he says, are often as well patronised by women as by men. In the fine houses into which he was invited he also found the women drinking. At one country house, when the ladies returned from a dance only one declined to take something, and that lady afterwards called to her father to bring upstairs a "glass of toddy." He has been unfortunate in his experiences of better-class houses, in which certainly one is often struck with the number of ladies who drink water only. But that there is a great amount of drinking among English women cannot be denied. Grocers' licences are largely responsible for this, but not entirely, as women of the poorer and lower middle class go into public-houses with little appearance of shame. Old men aver that this is a thing which they never saw in their youth.

UNQUALIFIED MIDWIVES.

AN inquest was lately held at Poplar Town Hall touching the death of Laura Emily Baker, aged twenty-four, who had been attended by a person who had acted as a midwife for six years, but had no certificate. Mrs. Baker complained after her delivery to her husband of the way in which the midwife performed her duties. She was in great pain. The midwife attributed death to the patient eating oysters five days after her confinement. The *locum tenens* for the parish doctor was called in, and found the patient in a very serious condition. After death he made an examination, which revealed that the deceased had been subjected to rough usage and unnecessary violence, and that fatal peritonitis had been set up. The jury found accordingly, and expressed an opinion that a law ought to be passed to prevent unqualified persons acting as midwives. The coroner in serious terms advised the midwife to abandon the occupation. It is very important that in the Midwives Bill care be taken to exclude incompetent midwives from the Register.

THE EFFECT OF OIL AND OTHER SUBSTANCES ON THE SECRETION OF BILE.

DR. ROSENBERG, by means of establishing biliary fistulæ in healthy dogs, has been able to extend somewhat our knowledge of the effects of different foods and drugs on the secretion of bile. It was found that towards the end of the three months during which the experiments continued, the quantity of bile diminished, but its consistency increased, probably through a deficiency of water. When the animals were kept without food, it was found that the flow of bile increased and decreased at the same periods of the day that it did when they were fed in the ordinary way. During the first hour of digestion the quantity increased, attaining its maximum during the second hour, after which it rapidly decreased, the consistence increasing as the quantity decreased. When fatty or oily substances were ingested, a stimulating action on the secretion was produced, a larger quantity of bile being secreted than when albuminoids or carbohydrates were taken, even large quantities of these substances producing far less bile than much smaller quantities of oil and fat. Indeed, these latter bodies possess a higher power of stimulating the secretion of bile than any other food or drugs, with the single exception of ox-gall, which, when taken by the mouth, increases both the quantity and the consistence of the bile excreted. Salicylate of soda increases the quantity but diminishes the consistence of the bile. The action of Durand's remedy, turpentine and ether, was found to be entirely due to the turpentine, which has a high stimulating power for the bile-secreting function of the liver. Carlsbad salts were tried both in gelatine capsules and in solution; their effect was to decrease the quantity and to increase the consistence.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE Council of this Fund is specially summoned on Monday, July 28th, at half-past three o'clock, to order the payment of awards to hospitals and dispensaries, as recommended by the Committee of Distribution, and also to record votes of thanks to Mr. Jonathan Hutchinson, late President of the Royal College of Surgeons, and other speakers, as well as to those who have interested themselves, not only at the public meeting in the Mansion House prior to Hospital Sunday, but generally. The total amount available for distribution, after allowing sufficient for liabilities and the usual current expenses, is £41,061 9*s.* 2*d.* Of this total, £39,101 9*s.* 2*d.* is now to be divided among 113 hospitals and 56 dispensaries.

THE LEPROSY INQUIRY.

AT the meeting of the Leprosy Committee last week some important resolutions were arrived at. It was agreed that a Commission should be appointed at an early date in coöperation with the Indian Government, which will contribute liberally towards the expenses. The three members of the Commission are to be nominated by the Royal College of Physicians, the Royal College of Surgeons, and the Committee respectively. Some discussion took place as to whether this third member should be a layman, but no conclusion was arrived at. It also transpired that the Journal of the Leprosy Committee, which is to publish facts concerning the disease, and collate information from all parts, will be of high scientific value. Amongst the many questions which require determination is that of the best treatment of the disease, which appears to be in a very unsatisfactory state. Leaving out of consideration the question of isolation and segregation—the *real* value of which (in spite of the general opinion) is still a moot point—the information we have at hand with regard to the most suitable therapeutic measures is fragmentary, contradictory, and not altogether encouraging. From time to time, various "specifics" have been lauded, and cases of supposed cures cited, but further trial has only resulted in failure, and the different drugs have dropped into the category of useless and discarded remedies. The chaulmogra oil seems to have held its ground longer than anything else, and is still to some extent employed with at least occasional benefit. Many observers consider that leprosy is quite incurable, and that all cases are hopeless. Nevertheless, there have been undoubted cases which have been cured in England and elsewhere. The records of several asylums in different parts of the world show that here and there is to be found a patient who has been in the institution for years—with deformity and other results of the old malady, it may be, but with all active manifestations of the disease long arrested, and

with the general health quite good. To all intents and purposes such cases have been virtually *cured*. In Norway, during the quinquennial period 1880–85, some thirty-five cases have been regarded by the asylum physicians as cured. Dr. Danielssen of Bergen, whose experience of leprosy is probably greater than that of any other man living, has stated that he regards cases in their early stages as not absolutely incurable; and many other physicians, both in Norway and other places, have also demonstrated that, although there is no specific, considerable amelioration of even bad cases may be effected by surgical and other therapeutical measures.

FATAL RESULT OF CATHETERISM OF THE UTERUS.

AT the Society of Legal Medicine, M. Vibert reported a case in which death was caused by catheterism of the cervical canal of the uterus (*L'Union Méd.*, No. 85). The unfortunate patient was brought to the hospital by two women, who said they had found her dead in the street. A post-mortem examination showed pregnancy advanced to about the fourth month, without visible traces of injury or any indications of commencing abortion. Inquiry revealed the fact that she had sought the services of a woman, who confessed that she had introduced into the cervix the cannula of a syringe, and that before the injection commenced the patient felt ill and died in a few minutes. The case shows that so simple an operation as catheterism of the uterus may cause death by syncope, comparable to death following sharp blows on the abdomen or larynx. M. Leblond remarked that he had often seen a tendency to syncope during uterine catheterism, but M. Vibert said that such attacks were not hitherto known to be fatal.

THE FRENCH AND THE CONGRESS.

THE lively writer in the *feuilleton* of *L'Union Médicale* (July 19th) who signs himself "Simplissime" treats the prevalent view that it would be derogatory for members of the French profession to attend a Congress presided over by Professor Virchow, with some semi-satirical comments, which it may be hoped will serve to show M. Huchard and his allies that their protests are somewhat baseless. The writer begins by saying that he does not blame the Government for following precedent in nominating delegates to attend the Berlin Congress. But he gives currency to a letter of Dr. Ch. Fauvel, assigning as his reason for abstaining from the Congress the near approach of the annual festivities in Germany in commemoration of Sedan. But, says the critic, M. Fauvel forgets that the Congress meets on August 9th; the Sedan fêtes do not take place till September 3rd, and it is not likely that the French members will prolong their stay in Prussia until that date. They had more reason in 1885, when, in returning from Copenhagen, they traversed the then decorated cities of Kiel, Hamburg, and Cologne on the very days of these celebrations. He does not think, then, that the preparations for the "Fête de Sedan" ought to deter Frenchmen from attending a scientific Congress, since it is very natural for Germany to celebrate so glorious a victory twenty years after it had taken place, and he reminds his compatriots that in 1871 they were saying "in twenty years we shall have our revenge." But this is not the true motive. No more is it the Virchow-Starck affair which M. Huchard launched like a bolt out of a clear sky, just when the French press were all uniting to bury differences and urging their readers to attend the Congress, although it was at Berlin. The real reason for abstention is to be found in the neglect which Germany showed to the meetings in Paris last year. The writer says that he has always adhered to that; but, if he is really serious, we would like to ask him if the "systematic refusals" of the Germans to those gatherings were not justified by the attitude of the French press, and the doubts whether their reception would have been cordial. There can be no such doubt on this head in regard to the International Congress.

THE BROWN INSTITUTION.

THE authorities of the University of London as the trustees of the Brown bequest, have been compelled to appeal to the public for funds to enable them to carry out the admirable work done at this institution upon a larger scale and with greater efficiency. The bequest left by Mr. Thomas Brown in 1871 yields an annual income of only £1000, and seldom has a trust been more advantageously used than in this instance. It has provided for the establishment of a laboratory in which the origin and progress of diseases are investigated, and a hospital in which animals belonging to poor people who are unable to pay for skilled veterinary advice may receive it without charge, except for the keep of the animal treated. Five lectures on pathology are annually delivered, to which the public have a right of free admission. As a hospital, over 45,000 animals have been admitted during the past sixteen years, and of these 34,650, or an average of more than 2000 per year, have been completely cured. A moment's thought will show how great a boon the treatment of these poor animals must have been to their owners, who, by the terms of the founder's will, must have been persons "unable to pay for skilled veterinary advice." The readers of THE LANCET need no reminder as to the valuable pathological researches which have been made in this institution by the past and present directors—Professors Sanderson and Victor Horsley—and their assistants, and by numerous independent workers under their guidance and direction. It would be a national misfortune if its operations either as a hospital or as a laboratory were to be curtailed, and we hope that the public will freely respond to the appeal of the committee for increased funds. As scientific inquiries and investigations have been almost constantly carried out here for the Privy Council and the Local Government Board, the Government might be fairly asked for a small grant in aid, and the Royal Agricultural Society should also make a practical acknowledgment of the services of the officers of the institution in undertaking researches into the causes and prevention of diseases of cattle at the request of the Society. The increase in the funds is needed for (*a*) a properly fitted room for surgical operations and wards for the after-care of the in-patients, and to allow of the efficient performance of modern surgical procedures; and (*b*) an endowment to permit of the appointment of a resident clinical observer to assist in the care of the large and annually increasing number of animals, additional hospital attendants, and the proper equipment and maintenance of the laboratory.

THE MEDICAL EXAMINATION OF SUSPECTED PERSONS.

IN THE LANCET of Feb. 22nd last, allusion was made to the penalties which medical practitioners had incurred by examining females without their consent, even upon a coroner's or magistrate's order. It was also shown that men suspected of indecent or criminal assaults ought not to be examined unless their consent be freely given, and that in every case it was advisable to caution the person so examined, whether male or female, as to the possible result of the examination—that it might be evidence for or against the accused. Although it is not five months since these cautions were given, and though copies of a paper embodying them have been sent by its author to all those readers of THE LANCET who applied for one, [it appears

desirable to reiterate them. Very recently a divisional surgeon of police was severely censured by Mr. Justice Hawkins for not cautioning a prisoner as to the result of the proposed examination to which he had consented, and so taking advantage, as the learned judge said, of the prisoner's ignorance. Similar cases have also come to our knowledge. There would appear to be some difference of opinion among the judges upon the point, but this should make surgeons more careful than ever to be on the safe side. Damages amounting to £50 were obtained from a magistrate who had given a written order for the examination of a female charged with concealment of birth, and against the physician and surgeon who obeyed it; nor would the learned judge (now Lord Justice Lopes) listen to the plea of *bona-fides*. It must be plainly understood that non-resistance is neither consent nor compliance; and that propriety would suggest the presence of reliable female witnesses in the case of a female, whether she be a prisoner charged with crime or a domestic servant supposed by her mistress to be pregnant. It is better to put up with the temporary inconvenience of the loss of a fee, or the risk of losing a good patient, than to act unlawfully; still better not to incur a judge's censure or a formidable bill for damages and costs. *Never examine without free consent and caution* is the golden rule which the medical practitioner will never have cause to regret having followed.

"THE LESSON IN ANATOMY."

REMBRANDT'S celebrated picture of Dr. Tulp lecturing to his pupils is well known to every visitor to the great picture gallery at the Hague, and is of special interest to medical men. A curious feature not generally known is that the muscles of the left forearm which are shown in the picture are wrongly drawn. The pronator radii teres is drawn as if it ran from above downwards and *in*wards from radius to ulna, instead of downwards and *out*wards from ulna to radius. Of this masterpiece, Messrs. Obach and Company, of Cockspur-street, have sent us a very fine etching by Mr. Ch. L. Dake, in the large size of 25 by 33 inches.

THE DISTRESS AT SUAKIM.

THE proposed establishment of a medical mission at Suakim is of happy omen for the distressed inhabitants of the district, among whom disease (particularly small-pox) and famine are now prevalent. According to the latest intelligence, there are outside the town some 2000 persons all more or less in a starving condition. Relief work has been provided by the Government for 600, a small amount of "durra" is daily distributed to 1000 more, and about 100 are in hospital. Great misery prevails also within the native town itself, the supplies at hand for disposal are by no means abundant, and little reliance can be placed on the productiveness of the district for some months to come. Help, to be effectual, should therefore be rendered without delay. It is hardly needful to add that, holding as we do in Suakim, the chief port of supply for the Soudan, we are morally bound to contribute as freely as the occasion requires to the needs of the desert population. Mr. Bourne, the hon. secretary of the "Eastern Soudan Famine Relief Fund," Broadway-chambers, Westminster, will gladly forward any donations received to the authorities at Suakim.

CRICKET FIELDS FOR LONDONERS.

THE peculiar fascination which cricket possesses for the Englishman is by no means limited to the rural population. We have only to visit some of the larger metropolitan open spaces in order to be convinced that many townsmen feel its attraction in an equal degree. It was in recognition of this fact, and of the great value of cricket as a means of physical training, that the London Playing-fields Committee was formed in March of the present year. At a recent meeting of the committee and others at the Mansion House the plan and scope of the work undertaken by this useful body were discussed at some length. City clerks, shopmen, and artisans, desirous of exercising what we may call their national birthright of recreation, have a friend in the committee. Facilities for play, which for most of them were otherwise unattainable, have by its promised assistance been brought visibly nearer. As to the scheme which it proposes to follow, no one of several alternative methods appears to be so well adapted to the peculiar needs of the case as that of hiring and subletting vacant land now held for the most part in private hands. Public parks and open spaces are, indeed, available for cricketing, but the area thus represented is too limited, and it cannot of course be monopolised even in the interest of the national pastime. Government grants are out of the question, so that the plan of park-hiring as above described is alone reliable. We are glad to see that the principle of self-help is well to the front under the proposed arrangement. The committee, though not by any means independent of public subscriptions, will act the part of a disinterested middleman between the owners of land and players, will acquire suitable grounds, and charge those who use them such rent as they can pay. "Health," said the Lord Mayor, at the late meeting, "is wealth to the nation"; and seasonable exercise, we may add, is the blood-stream of health. The purpose and practice of the committee we feel certain, therefore, will commend themselves to public support.

SUCCESSFUL ACTION FOR RECOVERING MEDICAL CHARGES.

THE *Birmingham Post* reports a successful action by Mr. Hallwright to recover from a gentleman £5 5*s*., chiefly for obstetric attendance on Mrs. ——, which he had agreed to pay. Though neither the husband of the woman nor the father of the child, he had relations with her, and had clearly authorised her engaging Mr. Hallwright, and promised to pay him, undertakings he afterwards, on quarrelling with her, sought to escape from. The judge was very severe in his remarks on the gentleman and his meanness, and ordered payment of the sum, with costs.

ROYAL COMMISSION ON TUBERCULOSIS.

THE Government have redeemed their promise to appoint a Commission to investigate the question of tubercular infection from food. The terms of the inquiry are to report "what is the effect, if any, of food derived from tuberculous animals on human health; and, if prejudicial, what are the circumstances and conditions with regard to the tuberculosis in the animal which produce that effect upon man." The scope of the inquiry is thus fairly defined, but the Commission will have ample evidence submitted to them, and will also doubtless undertake a thorough reinvestigation of the subject on the experimental side. The Commission is not a large one, but is representative of the Legislature in Lord Basing, the two great health departments—viz, the Medical Department of the Local Government Board, and the Agricultural Department of the Privy Council—in Dr. Buchanan and Professor G. T. Brown; whilst pathological science is more immediately represented by Dr. J. F. Payne and Professor Burdon Sanderson—the former well known as a thoughtful and practical pathologist, and the latter as one whose name has long been associated with the subject of tuberculosis. Mr. Leopold Hudson, F.R.C.S., formerly pathologist and now surgical registrar to the Middlesex Hospital, has been appointed Secretary of the Commission. It is not too much to say that the labours of the Commission will be followed with great interest by the

whole community, and especially by the medical and veterinary professions. The first meeting of the Commission will be held on Tuesday next, at 3 P.M.

STUDY OF INFECTIOUS FEVERS IN LONDON.

THE arrangements for a full study of infectious fevers in London are now complete, for the Metropolitan Asylums Board have sent a circular to the various London medical schools to inform them that their Fever Hospitals may be used by students for purposes of medical instruction. The rules and regulations adopted by the managers of the Metropolitan Asylums Board—after conference with representatives from the Royal College of Physicians, and approved by the Local Government Board—will be found in another column.

THE INTERNATIONAL CONGRESS ON ALCOHOL.

FROM the 3rd to the 5th of September this Congress, the third of the series, will hold its sittings in Christiania, and the programme gives promise of highly interesting and, we trust, fruitful discussions. The report of the president of the permanent committee (Dr. Forel of Zürich) will review the work achieved in lessening the evils of drunkenness between 1887 and 1890, after which papers will be read—(1) On "The Means which have proved most effective in Norway for the Diminution of Alcoholism"; (2) on "The Results of the Gothenburg System"; (3) on "The Alcoholic Question in relation to the Rearing of the Young"; (4) on "The Degeneration of Indigenous Tribes through the Spirit Trade"; and (5) on "Freely Diluted Alcoholic Beverages, or, in other words, Moderation, as a Means of combating Intemperance." Other papers on branches of the great drink question will be read by Dr. B. W. Richardson, Professor Böhmert, Dr. H. von Hebra, Dr. H. Kurella, and other distinguished promoters of the temperance cause. Many non-medical or lay friends of the same social reform will take part in the proceedings, the attractiveness of which will be materially enhanced by an exhibition of writings, illustrations, and various other objects bearing directly or remotely on alcoholism in all its ramifications. A similar exhibition was held at the last meeting of the Congress (at Zürich), and proved an excellent adjunct to the discussions.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Dr. Max Planck of Kiel will next summer take over charge of the new Institute for Theoretical Physics, and will teach this subject together with Professor Helmholtz.

Breslau.—Dr. Chun of Königsberg has been appointed to the chair of Zoology, in succession to Professor A. Schneider.

Göttingen.—Professor Schmidt-Rimpler of Marburg has been appointed to the Professorship of Ophthalmology vacated by Professor Leber, who has gone to Heidelberg. Professor von Hippel of Königsberg has declined the invitation to come to Göttingen.

Heidelberg.—Dr. Schroeder of Strasburg has been offered the chair of Pharmacology.

Munich.—Professor Boltzmann of Gratz has been appointed to the chair of Physics.

Vienna.—The duties of the chair of Physiology, which is being vacated by Professor Brücke, are in future to be divided between two professors. The names of those proposed for these chairs are Professor S. Exner for the first, and either Professor E. Hering of Prague or Professor A. Rollett of Gratz for the second.

Würzburg.—Professor Bonnet of Munich has been appointed in succession to Professor Stöhr.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Demange, Honorary Professor in the Faculty of Medicine of Nancy; Dr. Paul Loye, professor in the Training Institution attached to the Salpêtrière Hospital, Paris; Dr. Fauzi Bey, Professor of Surgery in the Medical School of Cairo.

A BIOLOGICAL STATION, similar to that at Naples, is about to be established at Plön in Holstein. It will be supported partly by the Prussian Government and partly by the Municipality of Plön. The director will be Dr. Otto Zacharias of Hirschberg, and in addition to him there will be four or five zoologists and botanists appointed.

SMALL-POX is reported to be making great ravages in the villages between Mansourah and Zagazig. Much sickness also appears to be prevailing at Cairo, and this gives rise to fears that small-pox may also break out in the city.

REPORT
ON THE
DUTIES, PAY, DIET, RECREATION, ETC.,
OF
HOSPITAL NURSES.

As deduced from their own Testimony.

(BY OUR OWN COMMISSIONER.)

AGREEABLY to the instructions received from the Editors of THE LANCET some twelve months since, I hereby submit as a preliminary report, the result of my endeavour to obtain by means of personal correspondence the testimony of nurses upon the subject of their hospital experiences, with a view to the discussion of nurses' grievances, which had already been inaugurated in the daily press. With this object a circular was prepared and a schedule of questions drawn up, of which copies are appended to this report. These have been addressed to as many nurses of the London hospitals as I have been able to reach by means of private introductions. This method of approaching my correspondents has of course caused the inquiry to be slow, and therefore protracted. Indeed, I can hardly now consider it much more than well begun, and this report is therefore only preliminary. Its publication may perhaps tend to remove in some measure the misaprehensions which have occasioned no small part of my difficulty, and in particular the radical misconception that the object of the present inquiry is merely to discover grievances or to formulate them. It will be seen that I have endeavoured in my correspondence to make it clear that strong points in the system of any particular institution are as much in request as weak points upon which a complaint might be founded, and the reason of this is that the most effective way of indicating a matter that needs correction is to point out how the difficulty to be overcome has in practice been surmounted elsewhere. Not unnaturally, perhaps, my correspondents have generally overlooked this second half of my request, and have taken it for granted that compliance with my suggestions would place them in an attitude of hostility to their official superiors. Consequently many of my letters have elicited no response at all; others call forth apologies only, of which the following extract is characteristic: "I am sure from what I have heard, Miss —— (matron) would not wish me to begin joining in the discussion now made public, and knowing so well her views on the subject, I think it would be neither loyal nor right to take, in ever so small a way, a part in the matter." After making allowance for these unproductive inquiries, there remain those that have been completely answered, and these are full of interest and of good practical suggestions. They point to

many improvements, which, if secured, would lighten the nurses' burdens and add materially to their comfort.

It will be understood that in what follows I am giving, to the best of my ability, the substance and effect of what the nurses' answers convey to my own mind. I shall as far as possible avail myself of extracts from their letters; but, as their correspondence has been invited upon the footing of private communication, I shall, of course, be bound to suppress anything that would lead to the identification either of an institution or of a nurse.

One of the commonest subjects of remark on the part of my correspondents is the food with which they are supplied. The cooking especially seems often to be faulty. Even when neither quantity nor quality is open to reproach, nurses complain of want of variety in food, and of the absence of fruit even in its season. One writes: "At times the cooking has been very bad, quite spoiling and wasting good food." Another says: "A little more attention to the cooking and serving of food would render it much more appetising without additional expense. The monotony of the diet, and not the quality, is distasteful to a tired nurse." This is obviously a very serious grievance; and one, moreover, that need not exist at all. An efficient cook is much less expensive than an inefficient one, for bad cooking means waste. Moreover, this fault, though undoubtedly existing in some institutions, is as certainly avoided in others. Thus from another hospital the testimony is: "The food is good, abundant, and well cooked." One cannot refrain from asking why it should not always be so, with the excellent kitchen arrangement of to-day and the London markets at hand.

But what strikes me as being the most urgent demand is for a shortening of the hours of unrelieved work. The twelve-hours system is a cruel strain on a woman's strength and nerve. From one of my reports I learn that three days in every week are thirteen hours and a quarter long, from 8·30 A.M. to 9·45 P.M. To such toilers recreation time must come too late to find in them the capacity for enjoyment. I will give the direct testimony of two of my correspondents on this point. The first writes: "In my opinion the chief evil of the present system of nursing is the long hours the nurses are compelled to be on their feet, and there will be no remedy for that till the day is divided into three parts of eight hours, with three relays of nurses. The night nurses are especially hard worked, for they are on duty twelve hours, and in the medical wards often have not the chance of sitting down for even half an hour; then, after a hard night, have beds to make, washing of patients, dusting, and breakfast to prepare and to give to each patient." Another lady writes: "I think everything in this great hospital satisfactory, except the length of time that nurses are on duty. Fourteen hours of work, which not only include hard manual but also responsible and anxious work, is, I consider, too much for any woman. Is it right that because a woman gives herself to this noble profession she should be overtasked? I have now worked in a hospital for over a year, and my experience is that the whole cry of nurses off duty is 'Oh! I am so tired.' Should this be? Should a nurse off duty feel so worn out as she does? I quite think that the eight-hours system should be introduced in hospital. Why should not some little bit of the charity which is so freely given to the patients be extended to the nurses? I must say, in conclusion, that in this hospital great attention is paid to the comfort of the nurses. The house-keeping is most excellent, and the nurses are happy in their work, only they are tired." The point which this correspondent makes in the question, "Why should not some little bit of the charity which is so freely given to the patients be extended to the nurses?" seems to me to be irresistible. Nevertheless, the eight-hours' day would mean not only increased numbers of nurses with proportionately increased outlay upon wages and board, but also extended house accommodation; and evidently the cost of such a change would be a very serious matter, and one which few, if any, medical charities are in a position to undertake. But even if it be impossible to effect all that could be desired in this direction, it does not follow that nothing can be done to improve the present position of the nurse. From more than one hospital I hear, for instance, that it is customary, when the conditions of the work will permit the temporary release of a nurse, for the matron to give a few hours' leave of absence, and at least in one case the wards are slightly overstaffed during the day in order that such opportunities may the more frequently arise. I cannot help feeling that what is in these instances done in an irregular and unsystematic way might equally well be done methodically and elsewhere. How it should be systematised is a question involving the discussion of a large number of details, and I do not feel myself prepared at the present moment to deal exhaustively with this part of the subject; but the following suggestion, which has reached me from a private source, seems worthy of some consideration, and might, I think, usefully form the starting-point of discussion:—"Suppose a body of twenty nurses, supplying an institution or a department in an institution. Under the prevalent system their hours of duty in the ward would extend to twelve hours and a half a day, to which usually a certain time taken up in study and attendance on lectures must be added in the case of a probationer. Now, suppose the staff increased to twenty-one for doing the same amount of work. It is plain that if eighteen continued to do the same duty as before, the remaining three might divide the day (of twenty-four hours) between them into three duties of eight hours and a half each. Thus the staff would now consist of eighteen nurses doing long duty and three privileged nurses doing short duty. It is clear that, by establishing a rotation among them, each of the twenty-one might become a privileged nurse once a week—that is to say, every nurse might get four hours off a week; or, by another arrangement, one day off in three weeks, or seventeen days in the year, an allowance more than equal to the present holiday. It is also plain that the cost of providing the additional nurse could not involve an addition of more than 5 per cent. to the existing cost of the nursing arrangements, so that a considerable amelioration in the condition of overwork is manifestly within the compass of a very reasonable demand upon the hospital finances." This scheme falls very far short of the eight-hours day, and might be carried out on a larger or a lesser degree according to the amount of the additional outlay which the managing committee might be prepared to face; but even such a compromise as this would be of immense value to those who count their leisure time by precious minutes, and who find at best a very meagre margin for relaxation. On this point one of my correspondents says, "Recreation time is most often spent in resting. Very energetic nurses spend it in studying. I find nothing but the animal instincts for food and rest are left me in my recreation times. I am too tired for any mental exertion." To be "too tired for any mental exertion" is surely a grievous loss of value. The ideal nurse must have her theory, not less than her practice, perfect.

Closely connected with this question of recreation is the matter of the annual holiday. By a comparison of the papers in my possession, I gather that the one holiday of the nurses' long year averages two weeks for a probationer, three for a staff nurse, and four for a sister. A probationer in one hospital where the leave of absence is only ten days, writes pathetically: "The committee will not hear of our having a longer one. When one spends two days in the train, as some of us have to, it leaves us eight days, and to spend about £3 on it seems waste." It must indeed "seem waste" when measured by the income of a probationer nurse. On the same point I have the opinion of a matron, who has responded most kindly to my inquiries, and who says, sympathetically: "I do not consider that our nurses get enough holiday." That is high authority, for in all the great London hospitals the duties of the matron are such that she has a very exacting standard in herself whereby to measure her subordinates. But, indeed, authority seems hardly necessary here. Considering the long hours, excessive fatigue, and many anxieties which a nurse undergoes during her year of work, it is obvious that two weeks once in twelve months afford a wholly inadequate holiday.

There is only one other point suggested by my correspondence to which in this report I propose to refer; for although my materials contain many facts to which I have not adverted, it seems to me more useful at the present time, and especially in view of the voluminous evidence which is being collected by the House of Lords' Committee, to direct attention upon a few salient points than to attempt to illustrate the whole field of the discussion. A rule obtains in some institutions of imposing household drudgery upon nurses. It surely is a very bad economy that employs a valuable expert as a mere housemaid. Why must these ladies be asked to expend their last bit of energy to "sweep floors, scrub lockers and locker boards, clean

brasses, and even keep lavatories in order, to clean lamd globes, and polish head boards"? For luxurious, over-fed individuals this sort of drill might be of great service, but such rough tasks ought not to be imposed on ladies whose utmost strength is heavily taxed by their own special duties, and to whom the delicacy of the hands is not merely a luxury, but an important item in their capacity for service. It is worth while reflecting that an invalid may be soothed by the softness or irritated by the roughness of the hands that minister to him, and that in this—as indeed in most other respects—the interest of the patient is involved in the considerate treatment of the nurse.

In bringing this preliminary report to a conclusion, I may perhaps venture a remark which is prompted by the not infrequent case of a nurse's proving physically unequal to the work of her profession. Might it not be worth while to make the medical examination of ladies applying to be taken on a hospital staff a little more strict than in some cases it appears to be at the present time? Some hospital staffs require a very complete medical account of all applicants, including even a retrospective glance at the family history. There surely is true wisdom in such a precaution, and a laudable attempt at preventing mischief instead of waiting to bewail it. The following is the circular alluded to above:—

Madam,—Considerable attention has from time to time been drawn by newspaper writers to the condition of lady nurses at our great hospitals in respect of the accommodation provided for them and the duties which they are called upon to discharge, and I have been asked by some persons who are greatly interested in the questions raised to collect (by means of correspondence with the nurses themselves) the facts of the case, and have gladly undertaken to do what I can in furtherance of this object.

Will you, then, allow me to say that your name has been kindly mentioned to me by ——, and that my object in submitting the enclosed list of questions is to enable you to understand the scope of the present inquiry?

It is hoped that in the result a comparison of notes will lead to the adoption of what are *good points* in one institution by others which may in respect of these particulars be less happily situated; and, in a word, that there will come about those improvements which naturally result from a comparison of notes. This being so, you will readily appreciate that my desire is to learn from you what you consider, in the arrangements under which you are working, to be either—

1. Strong points worthy of imitation elsewhere; or,
2. Weak points requiring a remedy.

As to the use to be made of your correspondence, please understand that the intention is to collect from the materials which may be forthcoming the *general result*, and not (unless for the purpose of illustration &c.) to give publicity to any details. Your name will of course be regarded as confidential in any case, but as to anything else which you may desire to have kept back from publication I shall be obliged if you will distinctly mark it "Private."

With respect to the schedule of questions which I have enclosed, You may feel free to answer some of them and not others, or you may prefer to discuss the present theme in another way. As to all such matters you will of course follow your own inclination, and I shall be equally obliged to you if you can assist me at all in this rather large undertaking, whatever the form in which you may prefer to throw your communication.

SCHEDULE OF POINTS SUGGESTED FOR DISCUSSION.

1. *Hours of Duty.*—What is the rule? How much leisure time daily? How much time for meals? What is the ordinary practice in these matters?

2. *Recreation.*—What holiday is allowed? What facilities are provided in the way of social intercourse, books, &c.? How are recreation and leisure time usually spent in point of fact—in your own case—in cases under your own observation?

3. *Duties.*—What duties, besides tendance on the sick, are imposed by the rules? What have in practice to be performed? What instruction is given? What opportunities are afforded for seeking advice and assistance in a case of difficulty or emergency?

4. *Diet.*—What meals are provided? When served and where served? Is the cooking satisfactory? Is the food good and abundant?

5. *Pay.*—What is the scale of pay? What allowances? Any scheme of retiring pension? What individual charges have to be borne by the nurse? Do you find it possible to save money at all?

6. *Further information.*—Names of any nurses engaged at your own or any other general London hospital, of whom inquiries similar to the above may be made.

THE REGISTRATION OF PLUMBERS.—A public meeting was held at the Kensington Town Hall on Wednesday, under the auspices of the Plumbers' Company, the Rev. and Hon. E. CARR-GLYN presiding. Resolutions were carried to the effect that efficient measures should forthwith be taken for securing a systematic training and instruction of plumbers' apprentices throughout the kingdom; that the attention of Parliament and the public generally should be directed to the anomalous circumstance that, while medical practitioners, druggists, and others dealing with matters affecting the public health are required to possess sufficient training and attest their qualifications prior to undertaking their duties, no such guarantee at present exists in regard to plumbers.

THE HEALTH OF THE ARMY IN 1888.

No. I.

THE annual report of the Army Medical Department for the year 1888 shows the average strength of the troops serving at home and abroad to have been 198,851. The admissions into hospital were in the ratio of 972, the deaths from all causes 9·21, the discharges by invaliding 14·02, and the number constantly non-effective from sickness 54·52 per 1000 of strength. The admissions were lower, but all the other ratios slightly higher, than in the preceding year.

In the United Kingdom the average force was 101,695, which furnished 741 admissions, 5·52 deaths, 15·91 discharges by invaliding, and 44·45 mean daily sick per 1000. These ratios correspond closely with those of the preceding year, the admissions and mean sick showing a reduction, and the deaths and invaliding a trifling increase; but they are all under the average of the last ten years. The troops in England and Wales had the highest proportion of admissions and constantly sick, and those in Scotland the highest of deaths and invaliding, but the lowest of mean sick. There were 14 cases of small-pox with 1 death during the year; 10 of them, including the fatal case, occurred at Sheffield, where the disease was prevailing as an epidemic. There were 237 cases of scarlet fever with only 3 deaths, being respectively in the ratio of 2·37 and ·03 per 1000. The greatest number of cases occurred at Aldershot, Dublin, and Woolwich, but nearly all the districts were affected to some extent. Enteric fever furnished 126 admissions and 34 deaths, or 1·2 and 0·33 per 1000 of strength. They were four times as numerous in Ireland as in England or Scotland, but the difference arose entirely from its greater prevalence in the Dublin district. The strength of the troops in it was 9153, the cases were 68, and the deaths 14, being in the ratio of 7·42 and 1·53 per 1000, while in the other districts in Ireland a strength of 12,953 furnished only 7 cases, with 5 deaths, or 0·54 and 0·34 per 1000, differing not materially from the results in Great Britain. Although the Royal Barracks, Dublin, had the largest number, cases were admitted from all the other barracks. "The actual cause of any particular case was very rarely discovered, and though insanitary conditions have been discovered in barracks, it must be remembered that the city itself has been in a very insanitary condition, and enteric fever has been very prevalent also among the civil population." In a few instances in Great Britain the cause of the disease was traced to an unsatisfactory state of the drains, to which attention was immediately given. Venereal diseases continue to be a cause of considerable inefficiency, the admissions from primary syphilis alone having been 66·2, and the constantly sick from it 6·2 per 1000. England had the highest and Scotland the lowest proportion of cases. The admissions from all forms of venereal disease amounted to 224, and the constantly non-effective to 18·19 per 1000. Of 81 deaths returned under the class of injuries, 38 were by drowning, and 17 suicidal; and there were also two suicidal deaths by poisoning by cyanide of potassium.

Distributed according to arms of the service, but omitting garrison staff and departments as exceptional, the admissions ranged between 535 per 1000 in the Royal Engineers and 844 in the Foot Guards; the deaths between 3·97 in the Household Cavalry and 9·88 in the regimental depôts; and the invaliding between 11·70 in the Royal Engineers and 22·00 in the Foot Guards. Although the Royal Engineers had the lowest admission and invaliding rates, they had the highest death-rate except the regimental depôts. The latter had the lowest proportion constantly sick, only 28·38 per 1000, while the Foot Guards had the highest, amounting to 65·34 per 1000. The mortality at different ages among the troops serving at home was—under twenty, 3·43; twenty to twenty-four, 4·75; twenty-five to twenty-nine, 6·54; thirty to thirty-five, 9·28; thirty-five to thirty-nine, 14·45; and forty and upwards, 19·35 per 1000. These correspond very closely with the averages of the preceding ten years. The invaliding at the same ages was—10·06, 16·36, 21·45, 13·51, 30·35, 38·10. The invaliding, arranged according to length of service, shows a remarkable uniformity in the first three quinquennial periods. Thus, in the first five years, it was 15·85 per 1000; in the second five, 15·33; and in the third five, 15·08 per 1000; it then rises to

27·48 in the fourth quinquennium, and to 29·73 of those above twenty years' service. The death-rate of the officers was 4·65 per 1000, or about one per 1000 under that of the men. Two out of 18 deaths were the result of injuries and one by drowning. The death-rate of the women was 5·95, and of the children 20·59 per 1000.

Gibraltar, from a garrison of 4736 men, had 586 admissions, 3·37 deaths, 36·47 constantly sick, and 6·75 finally discharged the service as invalids, per 1000 of mean strength. These ratios are all lower than in 1887, and considerably under the decennial average. There were 73 cases and 5 deaths returned under the head of enteric fever, being in the ratio of 15·4 and 1·06 per 1000 of the strength. This is double the proportion of admissions from the same cause in 1887, but little over one-half the death-rate. The principal medical officer was of opinion that "a proportion of these cases are remittent fevers, most decidedly not typhoid." The proportion of deaths to cases is certainly very low. The admissions for venereal diseases show a marked decrease, but still amount to 211 per 1000, and the constantly non-effective from them to 16·02 per 1000. Only two deaths from injury are returned, one by drowning while bathing and the other suicidal by gunshot. The strength of officers was 165, of whom 2 died, both of enteric fever. In an average strength of 288 women two deaths occurred, one from asthma and the other from uterine hæmorrhage. There were 18 deaths among 519 children, or 34·68 per 1000, the most fatal diseases being diarrhœa and enteritis.

The average strength of the troops at Malta was 6353; the admissions were in the proportion of 547; the deaths, of 6·29; the mean sick, of 33·24; and the final discharges by invaliding, of 8·81 per 1000, results very closely corresponding with those of 1887, but much below the decennial average. Enteric fever was the cause of 18 admissions and 12 deaths, or 2·8 and 1·89 per 1000 of strength. This is very much under the average of the preceding five years. The principal medical officer states that "although the history of each case was carefully inquired into, nothing new was discovered regarding the origin of the disease. No particular insanitary condition of the barracks or their surroundings could be detected, nor any special condition which did not equally affect the garrison generally." The admissions by all forms of venereal disease amounted only to 95, and the constant inefficiency from it to 6·92 per 1000. There were 4 deaths by injuries, 2 of them suicidal, by cut throat and multiple injury caused by jumping from a roof, one by drowning, and one by fractured skull from an accidental fall. One man also died from alcoholic poisoning, having drunk a very large quantity of spirit.

Of 196 officers 4 died, one of enteric fever, one of simple continued fever, one of meningitis, and one by a self-inflicted gunshot wound. Of the women, averaging 267, 5 died, 2 of fever, and one each of puerperal septicæmia, dementia, and burn. The deaths of the children were 29 in 406, the chief causes being debility, convulsions, teething, diphtheria, and diarrhœa.

The Royal Malta Fencible Artillery averaged 363 non-commissioned officers and men. The admissions into hospital were 595 per 1000, there were no deaths; the mean sick 26·72 per 1000, and the discharges by invaliding were 13·77 per 1000. No case of enteric fever occurred. The medical officer in charge is still of opinion that it would be more beneficial to issue rations in kind to the men than to give them in lieu thereof a money allowance.

At Cyprus, in an average strength of 855, the admissions were 966, the deaths 3·51, the mean sick 54·72, and the final discharges by invaliding 4·68 per 1000. The admissions and mean sick show a considerable increase upon the preceding year, but the deaths and discharges by invaliding a marked reduction. The increase in the admissions and mean sick was almost entirely due to venereal diseases, the ratios of which were more than doubled. Six cases of enteric fever were admitted, of which one died; two of them, including the fatal one, occurred at Troodos, three at Camp Peripedia, and one at the depôt, Limassol. They could not be traced to insanitary conditions. Of the 3 deaths among the troops, one was, as already stated, by enteric fever, one by apoplexy, and one suicidal by cut throat while the man was under treatment for enteric fever. From June to October all the troops were quartered at Troodos.

The average strength of the troops at Halifax was 1329; the admissions into hospital were 519, the deaths 8·27, the mean sick 34·72, and the discharges by invaliding 20·30 per 1000. The admissions and mean sick were lower, but the deaths and discharges higher, than in the preceding year. The increase in the death-rate arose from a fatal case of enteric fever and three deaths from tubercular phthisis. There were 12 cases of enteric fever, with one death; but the principal medical officer observes that "they were confined almost exclusively to men of the 2nd Battalion, West Riding Regiment, which arrived here in September from Bermuda, where the disease was very prevalent; and as the outbreak appeared immediately on their arrival, it is thought that the disease was imported thence." There was 1 death from alcoholic poisoning, and 3 violent deaths—1 by fracture of the skull, 1 by accidental gunshot on a shooting expedition, and 1 from suicidal gunshot wound. One officer was accidentally killed while out shooting. Two deaths occurred among the women—103 in number—one from enteric fever and the other from tetanus; 8 children died, out of 205, 4 of these from diarrhœa.

Bermuda, on an average force of 1346, had 689 admissions, 17·83 deaths, 34·60 constantly sick, and 7·43 finally discharged as invalids per 1000 strength, all lower than in 1887, except the deaths, which show an increase of 5·15 per 1000. The excess of mortality was entirely due to enteric fever. There were 128 admissions and 18 deaths returned under this head, being in the ratio of 95·1 and 13·37 per 1000 of strength; or more than double the preceding year. The great prevalence of this disease and mortality due to it occurred in the 1st Leicestershire Regiment, which arrived in the command from England on Sept. 21st, and was quartered at Prospect. In the succeeding three months this corps had 109 cases and 17 deaths, being in the *annual* ratio of 509 and 79·07 per 1000 of strength. Deducting this regiment from the general return, the proportion of cases of enteric fever would be 16·8, and of deaths 0·88 per 1000. In 1887 enteric fever prevailed as an epidemic at Prospect, and was supposed to have been caused by impurity of the drinking-water. After the suspected tank was closed in October the disease ceased. In 1888, prior to the arrival of the Leicestershire Regiment, only five cases had occurred at Prospect. No satisfactory explanation could be found for the outbreak in that corps. "The water-supply was frequently and carefully analysed, and the result was almost invariably satisfactory; the drainage is well laid; there is no possibility of any drain ventilating into any building on Prospect plateau occupied by troops; there was not, perhaps, quite as much water as was desirable for flushing purposes. The outbreak, therefore, could not well be attributed to any insanitary defect in connexion with the camp at Prospect." A committee, appointed by instructions from home to inquire into the causes of the epidemic, does not seem to have elicited anything beyond the fact that "the four medical practitioners examined were unanimous in stating that enteric fever was almost always present in Hamilton," but they do not seem to have suggested any cause for its prevalence. Two deaths by drowning were recorded, and one man committed suicide by hydrocyanic acid. No death occurred among the officers or among the women. Seven children died in a total of 161, five of them from diarrhœa.

The average strength of white troops in the West Indies was 1164. The admissions into hospital were in the ratio of 1099, the deaths of 3·44, the mean sick of 55·55, and the discharges by invaliding of 7·73 per 1000. With the exception of the proportion constantly sick, which shows an increase, these are all much lower than in 1887, and, except the admissions, very much under the decennial average. The reduction in the death-rate has been chiefly in enteric fever; the admissions by it were much higher than in the preceding year, being in the ratio of 30·1 per 1000 of strength, but there was only one death, or 0·86 per 1000. All the cases occurred in Jamaica, and all but two at Newcastle, where it prevailed as an epidemic in July, August, and September. Its outbreak was believed to be due to "the disturbing of old latrines during reconstruction ..... and subsequently the spring tank water was thought to be liable to contamination." There was no enteric fever in the district. Venereal diseases gave rise to 344 admissions per 1000, and 23·60 constantly non-effective. In the class of injuries, only one death was returned, the cause being sunstroke. In a strength of 102 officers, two died, one from remittent fever and the other from malarial cachexia. There was no death among the women. Of 122 children, 5 died from diphtheria, dysentery, debility, pneumonia, and jaundice. The black troops, from an average strength of 1132, furnished 1136 cases, 11·48 deaths, 71·71 mean sick, and 45·93

discharges by invaliding per 1000, all lower than in the preceding year, but, except the deaths, above the decennial average. Three cases of enteric fever were admitted in Jamaica, all of which recovered. The admissions for all forms of venereal disease were 412 per 1000, or upwards of one-third of the total cases, and the non-effective from this cause was 31·55 per 1000. Sunstroke was the cause of one death. No deaths occurred among the women. Of 60 children, 2 died of bronchitis.

The average strength of the black troops on the West Coast of Africa was 502, of whom 328 were quartered at Sierra Leone and 174 at Cape Coast Castle. The admissions from the force were 1247, the deaths 9·96, and the mean sick 79·10 per 1000; no men were discharged by invaliding during the year. The admissions and mean sick were higher, but the deaths much lower, than in 1887, and, except the mean sick, much under the average. No cases of enteric or of yellow fever were reported. One death was caused by remittent fever at Cape Coast Castle; there were 2 deaths from tubercular phthisis, 1 from meningitis, and 1 from nephritis. Venereal diseases furnished 341 admissions and 29·44 constantly non-effective per 1000. Three wounds were received in action during the Yonnie expedition, but none of them proved fatal.

The average strength of the South African command was 3717, including a detachment of 239 men at St. Helena. The admissions were in the ratio of 882, the deaths of 7·80, the mean sick of 58·53, and the discharges by invaliding of 16·14 per 1000. These correspond very closely with the ratios of the preceding year. There were only 10 cases and 2 deaths of enteric fever; one-half of each occurred in the Cape Colony and the other half in Natal or Zululand. Of the former, 2 were at Cape Town, and three included the fatal case at Simonstown. Of the latter, 4 and a death were at Etshowe, and one case at Pietermaritzburg. The admissions by all forms of venereal disease were 340 per 1000 of the force, and 2 deaths were reported from constitutional syphilis. The proportion constantly non-effective from these diseases was 24·72. There were 5 deaths from tubercular phthisis, or 1·34 per 1000 of strength. "The Principal Medical Officer remarks that it does not appear to be well understood that tubercular disease of the lung is, if anything, more rapidly fatal on the seaboard in South Africa than at home, and people with this affection sent to the Cape should receive instructions not to remain on the seacoast." In addition to these deaths, there were 2 from pneumonia and 2 from pneumonic phthisis, so that nearly one-third of the total mortality was due to pulmonary disease. There were 7 deaths under the class of injuries; of these, 2 were from gunshot wound of the abdomen received in action, 1 from suicidal gunshot, 1 from lightning stroke, 1 from drowning, and 2 from multiple injury. There were 8 admissions into hospital from lightning stroke. In a force of 153 officers there were 3 deaths, 1 from gunshot wound of the head received in action, 1 from syncope, and 1 by accidental drowning. Among the women, 208 in number, there were 2 deaths, 1 from pneumonic phthisis and the other from embolism. Of 411 children, 11 died, or 26·76 per 1000, the most fatal disease being diarrhœa.

In the island of Mauritius the average strength was 405; the admissions were 988, the deaths 12·35, the mean sick 52·67, and the discharges by invaliding 19·75 per 1000, all very much lower than in the preceding year, and also, except the invaliding, than the decennial average. The greatest reduction in the admissions has been in the class of malarial fevers, but it has also been considerable in venereal diseases and in injuries. The reduction in the sickness and mortality appears to have been the result of most of the troops being quartered at Curepipe. "Port Louis still upholds its evil reputation, and it is yearly becoming more unhealthy. The Line Barracks are situated in one of the most unhealthy parts of the town, and as few men as possible, consistent with the performance of the necessary duties, have been quartered there." There were 2 cases of and 1 death from enteric fever, and a fatal case was also returned as typho-malarial fever. No distinct cause could be traced for these cases, but "the insanitary condition of Port Louis is sufficient to account for them." A large proportion of the cases of malarial fever occurred among the men at Port Louis. The admissions by venereal diseases were 252 per 1000—upwards of one-fourth of the whole; and the proportion constantly non-effective by them was 14·16 per 1000. There were no deaths from local diseases or from injuries.

The average strength of the white troops serving in Ceylon was 1133; the admissions were in the ratio of 1116, the deaths of 15·88, the mean sick of 64·18, and the discharges by invaliding of 8·82 per 1000, differing in no material degree from the results of the preceding year, or from the average. There were 19 cases of and 7 deaths from enteric fever, being respectively 16·8 and 6·18 per 1000 of strength. All but two of the cases occurred at Colombo; of the two, both fatal, one was at Trincomalee and the other at Kandy. The senior medical officer believes "that the cases are caused by sewer gas generated in the main drain, into which all the surface drains of that portion of the town called the Fort empty themselves.....Very few of the numerous openings of the drains about the barracks are trapped, and foul gases may readily find their way into the rooms occupied by the men." Surely this is a condition of things which ought at once to be remedied. The admissions by all forms of venereal disease were 355, and the constantly non-effective by them 21·87 per 1000 of strength. Only one death appears in the class of injuries, that of a man accidentally blown from a gun while a salute was being fired at Trincomalee. One officer died from heat apoplexy. There were no deaths among the women. The black troops averaged only 136; the admissions were 551 and the mean sick only 16·76 per 1000. No death occurred, and only one man was discharged as an invalid, his disease being tubercle of the lung.

The strength of white troops in China and the Straits Settlements was 2329, of whom 1241 were stationed at Hong-Kong. The admissions into hospital at Hong-Kong were 1081, the deaths 13·70, and the mean sick 55·70 per 1000; in the Straits Settlements they were 1193, 9·19, and 74·71; the discharges by invaliding from the whole force were 8·16 per 1000. No case of enteric fever occurred in the command, and only one case of cholera (which, however, proved fatal) at Hong-Kong, where it occasioned considerable mortality in the gaol and among the civil population. There were 7 deaths from remittent fever at Hong-Kong. Its prevalence and fatal type were attributed to the disturbance of the soil in making roads and constructing the Tytain reservoir. The decrease in malarious fevers at Tanglin, which took place in 1887, was maintained in the year under review, only 25 cases having occurred. Venereal diseases were the cause of 360 admissions and 25·63 constantly non-effective per 1000 of strength; they were more prevalent in the Straits Settlements than at Hong-Kong. In both they are stated to have increased greatly in prevalence and severity since the repeal of the Contagious Diseases Acts. Nine deaths were returned under the class of injuries. Three officers died in a strength of 98; one from remittent fever and one by drowning at Hong-Kong, and one from dislocation of the spine by a fall from a verandah at Fort Canning. Of 90 women, one died at Tanglin from accidental poisoning by hydrocyanic acid. There were 5 deaths among the children, being in the ratio of 32·89 per 1000 of strength; the causes were remittent fever, anæmia, convulsions, diarrhœa, and asphyxia by overlying. The works were completed for the new water-supply for Hong-Kong from Tytain, and a scheme for improved drainage was under consideration. "Among the sanitary improvements at Hong-Kong may be mentioned the cementing of a nullah near the Victoria Barracks to the extent of 500 feet. Much sanitary advantage is said to have resulted, as malarial fevers, which were very prevalent in the adjacent barracks, have lessened."

THE FRENCH MEDICAL PRESS AND PROFESSOR VIRCHOW.

WE have recently alluded to the unfortunate attitude taken by some prominent medical journalists in France with respect to the International Congress, and in particular with regard to its eminent president, Professor Virchow. In the current number of his *Archiv für Path. Anatomie* (Bd. cxxi., Hft. 1), Professor Virchow replies to these attacks in a brief article, of which the following is the substance:—

"The article upon International Congresses with which I opened the last volume of this *Archiv* (Bd. cxx.) has evoked certain recriminations in France. Thus the *Revue Générale de Clinique et de Thérapeutique* of June 11th (No. 24, p. 390) contrasts the passage in which I invited foreign colleagues to take part in the coming Congress at

Berlin with some passages from a former article of mine written in 1871, and then asks: 'On demande si le signataire de cet article est le même que de celui du président du Comité d'Organisation du Congrès International Berlinois. Si c'est le même, comme tout le fait supposer, on demande si le R. Virchow de 1890 a désavoué les paroles du R. Virchow de 1871, et celles de Carl Stark, cet "aliéniste distingué de l'Allemagne du Nord."' This refers to an article by me, entitled 'Nach dem Kriege' (*Archiv*, 1871, Bd. liii.). The passage in question occurs on p. 7. M. R—— D——, the author of the note in the *Revue Gén.* quotes this from a translation in the *Revue Scientifique* (1871, 2nd ser., p. 196). The tone of the note is shown in the fact that in the quotation Herr Carl Stark is termed, 'Un aliéniste distingué de l'Allemagne du Sud,' and in the above-mentioned note by M. R—— D——, in quotation marks, 'aliéniste distingué de l'Allemagne du Nord.' When I add that in my original article the phrase simply runs 'A South German alienist,' and that it lacks any such ornamental epithet as 'distingué,' the tendency of this quotation will be obvious. Moreover, I ought to state that in the original article I go on to say, immediately after the incriminated passage: 'We cite this not with the object of giving offence.....' Did I wish to set forth the meaning and aim of my article, there would be no option but to reprint it in its entirety. I will not do this, but rather leave those who desire to judge it for themselves to peruse the original or its translation. It may suffice here to point out that in this very article I say (p. 21): 'Politics divide, science unites, the nations, and woe to those who sever this bond. Would that the foregoing remarks might contribute to smooth the path for reconciliation. They are frank and honest, and they may possibly wound here and there. But no real reconciliation can take place without frank understanding, and with frankness one runs the risk of wounding. It is not the first time that I have trodden this path, and my experience encourages me in it, since my former efforts were not in vain.' That this hope for a coming reconciliation was in no wise an empty form of words is borne out by unimpeachable testimony. For in the previous year, whilst the war was raging in all its fierceness, I published an article, 'Der Krieg und die Wissenschaft.' This article, which appeared in September, 1870, concluded in the following terms (*Archiv.*, Bd. li., p. 5), which I do not hesitate to reproduce without curtailment: 'May it be possible for medicine, which in both armies during the war has been compelled to a certain amount of coöperation, to make the first advances, and prepare for a closer understanding. May all science exert its influence to promote the restoration of peace in the reconciliation of hearts and minds in the common welfare. May it be possible for each of the two peoples to learn to understand that the foundations of their individual efficiency can only be secure on the ground of national progress, and that therefore this ground must be free and safe from outside attack; and that, moreover, national development has to be founded ultimately on a human understanding which will enable individuals to rise above the limits of merely national concerns towards the highest aims of humanity. That is the ennobling task which, at a time when it is finally falling out of the hands of the Catholic Church, can only be taken up by science. May Science remember and realise the beautiful sentence, "Peace on earth."' In this spirit have all my subsequent writings been penned, including that which is now being attacked. And in this spirit did I, in 1878, accept the invitation to the Anthropological Congress at Paris. But unhappily I must state that one of my former pupils took advantage of my presence in Paris to launch against me a severe attack in one of the most widely read political journals, which abounded in untruthful assertions, and which has since made it impossible for me to accept any further invitations. Perhaps the memory of this event was still lively when I wrote the article on International Congresses. If I could explain the sole source of this attack there is hardly anyone who would fail to uphold my action. But I had no desire to enter into such personalities. I only felt it needful to tell our colleagues that in Berlin they might not only not expect to receive a treatment similar to that which was in part awarded to me in Paris, but that they would be received in a truly collegiate spirit, with all the respect which we could offer to guests and friends, and in the hope that—at least in scientific regions—there would be thorough coöperation. This fresh attack has given me the opportunity to once more repeat this assurance. May it be possible for our French colleagues to be sure that we regard this International Congress indeed as a ground of reconciliation, or at least of understanding, and that we shall try to avoid in the press and elsewhere anything which could possibly lead to fresh discord.

"*Supplemental Note.*—A further continuation of the attack, and with increased severity, is made by M. Huchard in the last number of the *Revue* (No. 26, p. 419), wherein French physicians are directly advised not to go to the Berlin Congress on account of my article of 1871 (Cf. *L'Evénement*, June 28th)."

NEW MORTUARY AT LIVERPOOL.

THE completion of a new mortuary in Liverpool, with all the latest sanitary improvements, is an event of not merely local interest, it is of great importance to all engaged in sanitary work, to coroners, medical practitioners, and the public generally. The providing of mortuaries is one of those matters the need of which, though clear as the sun at noonday to all sanitary authorities, and to others who are greatly inconvenienced by the want of them, is still apparently a *questio vexata* with those whose duty it is to supply them. There would appear, indeed, to be some doubt as to with whom the duty lies, and to this circumstance it must be due that many large centres of population are still without mortuaries, notwithstanding the repeated remonstrances of coroners, their juries, and surgeons, who have been compelled to make necropsies under circumstances which are a scandal to this country and the age in which we are living. It is to be hoped that before the dawn of the year 1900 a mortuary will have been established wherever it is required, and that such a blot upon our boasted civilisation will have ceased to exist.

As the history of the Liverpool mortuary may resemble that of some other localities, a brief account may here be given. In the early part of this century all human bodies found in the river or docks, or exposed elsewhere, were taken to the deadhouse situated beneath the tower of St. Nicholas', better known as the old church of Liverpool. This deadhouse was no doubt a parish institution, managed by the parochial authorities. Later on a new deadhouse was erected within the Prince's Dock enclosure by the Dock Committee of the City Council. It was simply a receptacle for dead bodies, for which there was a large slab. A separate one existed at the far end for the purpose of examining any body separately, and presumably for the purpose of making a post-mortem examination. To this place were conveyed the bodies removed not only from the river and docks, but also from all parts of the borough, comprising a distance from the deadhouse of nearly three miles, northwards, southwards, and eastwards respectively, the river being the western boundary. Much inconvenience having been caused by dead bodies being taken to the hospitals, a police order was issued directing that "dead bodies found in the streets should be taken to the deadhouse, Prince's Dock, so that the public institutions may not be troubled with such cases unless there be a doubt as to actual death." It was here that the many victims of the St. Joseph's Roman Catholic Chapel fatality were taken. Fifteen persons were killed in the panic caused by an alarm of "fire." The inadequate accommodation and unsuitableness of the place were in this instance forcibly shown; but worse was to come. In 1874 the site of the deadhouse was required for dock improvements, and the present structure, partly of brick and partly of wood, was reared within a short distance. Almost ever since its erection it has been complained of by those whose duty took them there—the coroner, the surgeons who were sent by him to inspect bodies, the police who had charge of it, and those who went for the painful purpose of identifying the bodies of missing relatives. The place belonged to the Mersey Docks and Harbour Board, on whose land it stood. This Board had taken the place of the Dock Committee of the City Council, which ceased to exist in 1857, and they reasonably contended that it was no part of their duty to provide a mortuary for bodies brought from the city. Even if it were incumbent on them

to provide one for bodies taken from the river and docks, the barest shelter was all that they could be expected to give. The parochial authorities cleaned the place periodically, and paid for the gas and water, not because they were bound to do so, but because of "precedence." The City Council asserted that the Dock Board were bound to do what the Dock Committee had done before, which included all connected with the deadhouse or mortuary. It was an apt illustration of how not to do it—a veritable proof that what was everybody's business was nobody's business. And so for nearly sixteen years past dead bodies have been taken to a wretched shed, inquest juries have been taken there, and necropsies made—often in most important medico-legal cases—in spite of reason, remonstrances, and complaints *ad nauseam*.

Meanwhile the Public Health Act was passed in 1875, which would appear to make it compulsory upon the local authority (i.e., the urban sanitary authority *alias* the Health Committee of the City Council) to provide a mortuary; and the clause empowered them, though not compulsorily, to provide a post-mortem room (clauses 141, 143). As was pointed out in a local daily paper, the local authority could be required by the Local Government Board to provide a mortuary, which is defined to be "a proper place for the reception of dead bodies before interment." The possible appearance of a Local Government Board inspector upon the scene would seem to have produced some effect. It may have been a coincidence. But at any rate, it was resolved, after much discussion, that a new mortuary should be erected near the site of the present one, at the joint expense of the City Council and Dock Board, each also paying half the cost of maintenance.

The new building comprises four separate compartments. It is built of red brick with red stone facings, the greater part being lined inside with yellow and brown glazed Ruabon bricks, giving a pleasing appearance, as well as being clean and easily washed. There are three doors of entrance, and over the central one is the word "Mortuary" cut in stone. To the right of this is a door leading to a vestibule running the whole length of the building. This vestibule is roofed in, well lighted and ventilated, and having on its inner side a glazed partition, through which is obtained an excellent view of the next chamber, or mortuary proper. This is also well lighted and ventilated with five separate sloping slabs, the floor being so arranged that all wet will flow into a channel continuous with an open trapped drain. The slabs are so arranged that an excellent view can be had of each body through the glass partition of the vestibule. Each slab being separate will enable anyone to get all round it, a great improvement on one large slab, which is inconvenient to everybody. The third entrance leads into an ante-room containing a fireplace, with boiler, for the supply of hot water to the post-mortem room, as well as lavatory, lock-up cupboards, and shelves for the safe custody of viscera, &c. Passing through the inner door we come to the post-mortem room, which has a separate roof of its own, as required by the Act, and is quite separate from the mortuary proper. It is lined throughout with glazed bricks, has a tiled floor, central post-mortem table, fireplace, sink with hot and cold water laid on, slab for scales and weights, and desk for note-taking. The table is of slate, with slope downwards from the centre to each end, and brass drainage holes at each corner, from which run four pipes to the central pedestal of glazed bricks, to discharge into an open drain trap, into which the sink also discharges. The greatest care has been taken with all the drainage, the pipes for which have been specially made by Messrs. Doulton. The whole work reflects the greatest credit upon Mr. Berrington, the architect to the Dock Board, who has taken pains to ensure the thorough completion of the work with all the most recent improvements.

The building is now quite complete, and Dr. Taylor, the medical officer of health, is making arrangements at the request of the Health Committee for its future management. It will still be in charge of the police, who are relieved every eight hours; but there will be in addition an official who will assist at post-mortem examinations and perform other necessary duties which it would be unreasonable to expect policemen to do except at greatly increased pay.

Liverpool has possessed a central coroner's court for many years past, and it would tax the memory of the oldest inhabitant to call to mind an inquest held in a public-house. When a regular court cannot be secured, some suitable building can be had temporarily. Mortuaries are even more necessary than coroners' courts. A landlord who might be willing enough to let the bar parlour for an inquest will positively refuse to take in a dead body, even in any of the out-houses. Bodies which are the property of the coroner must be deposited in a suitable place where a post-mortem examination, if required, can be made without offence to anyone. What has been done in Liverpool should be an encouragement to those who are endeavouring to establish mortuaries elsewhere. It is hardly likely that the same difficulties will be encountered, since the circumstances were somewhat exceptional. If any doubt exists as to the meaning of the words in Clause 141 of the Public Health Act previously quoted, this should be set at rest by an appeal to the Local Government Board. It will be remembered that in the Whitechapel murders Mr. Phillips complained greatly of the place where he had to make the necropsies of some of the victims. Wherever there is a wrong there is said to be a remedy, and this should be found at no matter what expenditure of time or money.

Great credit is due to Mr. F. W. Lowndes, surgeon to the Liverpool police, for his unceasing and finally successful efforts in procuring adequate mortuary accommodation for Liverpool.

THE FACTORY REPORT.

THE report of the chief factory inspector for the year ending with the month of October, 1889, records increased activity in most of the important industries which come under his observation, and, as a consequence, some increase in the number of accidents which he has to report. It would seem, however, that, little by little, improved conditions are being established, both in respect of the sanitary conditions under which work is carried on and the precautions adopted to prevent accidents resulting from the operation of machinery. As bearing upon the former of these points, attention is drawn in the present report to what seems to be a very important and very simple improvement in the art of weaving. It is well known that the air of weaving sheds has to be kept moist in order to prevent the development of charges of electricity upon various parts of the swiftly moving machinery. The most obvious, and at the present time the almost universal, way of obtaining this effect is by discharging steam into the atmosphere. The condensation of the water vapour moistens the atmosphere, thus rendering it sufficiently conductive of electricity to prevent the formation of mischievous charges at any points. The obvious consequence of thus loading the atmosphere with heated water is to raise the temperature, and to cause everything exposed to it, and especially the worker's clothing, to be saturated with moisture. It is not difficult to understand that such conditions prove to be in the highest degree prejudicial to the workers' health. The new method, which is said to have been successfully tried in a factory at Belfast, consists in substituting for steam the condensed vapour arising from a cooling reservoir. This vapour—or rather, as we presume, the air carrying it—is fed into the weaving shed by means of a fan, and has the effect not of heating but of cooling the temperature of the building. It is said to be more economical than steam, as it amounts to the employment of a waste product; and we hope that this is correct, since, if so, that circumstance will greatly facilitate the general adoption of the new plan. Theoretically, nothing can be better or better adapted to its purpose than the agent now proposed. For rendering air conductive of high-tension electricity nothing more is necessary than that it should contain water vapour at the point of saturation. Whether the temperature be higher or lower does not in the least matter; but, on the other hand, the quantity of water vapour which will produce saturation in a given quantity of air at one temperature will be short of saturation at a higher temperature, and hence air which has been in contact with water at any given temperature becomes super-saturated in the course and by the fact of cooling. This is the principle of which apparently the new invention is an adaptation, and it is plain that by carefully adjusting the temperature of the air drawn off from the cooler the

inventor will be able to provide an atmosphere which will be saturated when in contact with the cool surfaces of the machinery, but perfectly dry when in contact with the warm bodies of workpeople. Hence it will conduct away the accumulating electricity, but will not deposit moisture in the workman's or workwoman's clothes. In other words, it is over again the familiar phenomenon of the sitting-room atmosphere, which is perfectly dry to the skin, but deposits streams of water on the windows. In this domestic experiment the source of the moisture is generally to be found in the exhalations from the bodies of persons assembled in an overcrowded room, and consequently it goes hand in hand with imperfect ventilation, and often with overheating; but there is no reason why the same hygrometric conditions should not accompany pure air and a wholesome and pleasant temperature.

THE CHEMISTRY AND PHYSIOLOGICAL ACTION OF PHOSPHOROUS OXIDE.

THE June number of the Chemical Society's Journal contains a full account of the recent research on phosphorous oxide which has been carried out jointly by Professor Thorpe and Mr. A. E. Sutton, of the Normal School of Science, South Kensington. It is a noteworthy fact that it is seldom that an inquiry into the nature of well-known inorganic elements results in the full confirmation of the characters which have usually been assigned to the substance experimented with. On the contrary, in many instances surprising results are often obtained, inasmuch as properties are frequently discovered which are found to be of a nature entirely new and opposite to those which are described in the text-books. This in a measure is probably due to the circumstance that investigators have of late years devoted their time chiefly to the fascinating and fashionable field of organic chemistry. The authors have in the present research obtained phosphorous oxide by the slow combustion of phosphorus in an apparatus of special construction. So prepared, it is described as a white wax-like solid, which melts at 22·5° C. to a clear, colourless, and mobile liquid, resolidifying at 21° and boiling at 173·1° C. The formula as deduced from the vapour density and Raoult's recent method is P_4O_6, thus exhibiting perfect analogy to arsenious and antimonious oxide, As_4O_6 and Sb_4O_6 respectively. At high temperatures it is resolved into tetroxide and free phosphorus. Sunlight changes it to orange yellow, and ultimately dark red; the exact chemical nature of these changes has not yet been investigated. More interesting is the action of water, alkalies, alcohol, &c., upon it. Phosphorous oxide *slowly* dissolves in water, and *in a few days* forms a solution of phosphorous acid. Most text-books describe the oxide as possessing a strong affinity for water, so much so that it combines with it with such violence that a hissing sound is produced, as with a red-hot iron. With hot water, on the contrary, the reaction is very energetic, red phosphorus, the suboxide, spontaneously inflammable phosphoretted hydrogen, and phosphoric acid being violently produced. Cold alkalies, such as caustic potass, act similarly to cold water, resulting in the gradual formation of phosphite of potassium. Hot alkalies act like hot water, phosphate and phosphoretted hydrogen being formed. Phosphorous oxide ignites in contact with alcohol, forming diethylphosphorous acid. As would be expected, it readily oxidises to the pentoxide on exposure to air or oxygen. Under diminished pressure oxidation is accompanied by a luminous glow, which is instantly stopped when the pressure is restored. Ozone is not formed. The melted oxide readily ignites in the air. Finally, phosphorous oxide has a well-marked physiological effect, and the authors think that the influence of phosphorus on the glycogenic functions of the liver and on tissue change may not improbably be due to this substance. It is known that caries is produced in those persons engaged in match factories only when exposed to the fumes, for Dr. Lauder Brunton has found that when the bone of an animal fed by phosphorus is exposed to the air no carious change takes place; but when it is exposed to the fumes caries is produced. And, further, it has been noticed amongst match-making people that only those who have carious teeth suffer from necrosis of the jaw. This may possibly be explained by the fact that the fumes from phosphorus consist largely of phosphorous oxide, for by merely drawing air over phosphorus a deposit possessing all the characters of phosphorous oxide is obtained. The odour, moreover, is identical with that of phosphorous oxide, and also with the peculiar smell that invariably accompanies the making and handling of the composition used for match-tipping. Under these circumstances, it is extremely probable that pure phosphorus possesses no smell at all. Prof. Thorpe and his colleague are to be congratulated on the interesting and important results they have obtained, both practical and theoretical. Chemists, at least, will not fail to recognise the fact that much valuable and useful information has been added to their storehouse of knowledge.

THE ROYAL EDINBURGH ASYLUM.

THE commemoration stone of the new department of this asylum at Craig House was laid on the 16th inst. by the Earl of Stair, deputy governor, in the presence of a large and representative gathering. The clergy, the University, the Colleges of Physicians and Surgeons, the Lunacy Board, and many public bodies in the city were represented, while the majority of the Scotch asylum physicians and superintendents were present, this addition to its mental hospitals being regarded as an important event in Scotland. The new institution is for 150 of the richer class of patients, and is, when completed, to take the place of the old East House opened in 1813. Great pains have been taken to make the plans fulfil all the modern requirements for such a hospital, and to lead the way in many respects. There are eight central wards and six villas, two of which are small hospitals.

Lord Stair gave a sketch of the history of the institution since the inception of the idea of such a building in 1792 by Dr. Andrew Duncan and the College of Physicians. The insanity of the poet Ferguson, and the absence of any proper means of treatment, first suggested the idea to Dr. Duncan.

Sir Douglas Maclagan, President of the Medical Board, said, "It was a most interesting thing to observe that from the beginning of the institution up to the present time it had maintained the same broad constitution, that both the more affluent and the poor classes should be looked after, and that, by a wise adjustment of the means, what was won from the treatment of the affluent should be applied to diminish the expense to the poor. Everything in the institution was tinged with the colour of philanthropy." He spoke eloquently on the influence of art and beauty on bodily and mental ailments. "Art, as developed in such a building as that, in its architecture and in its pleasant site, was itself not merely a help to the doctor, but a medicine of the most valuable kind."

Dr. Clouston spoke on the medical aspect of insanity, showing that science must rid the public mind, as it had rid the medical mind, of its outrageous and hurtful prejudices and its feelings of repulsion in regard to mental disorder. Science knew nothing of repulsion in regard to what was to benefit humanity. Nothing to it was common or unclean. Some of the greatest triumphs of medicine had consisted in attacking problems previously repulsive to ordinary humanity, and in rendering them of the keenest interest to mankind. The prejudices that now so often add to the pain of mental disease, in the case of the sufferers and their relatives, were not worthy of our civilisation and must be got rid of. He trusted New Craig House would help to take away this reproach, and he believed that it would take its place as one of the great medical and philanthropic institutions of Edinburgh.

The institution is to cost about £70,000, not including the price of the site, which is £30,000 in addition. The President of the College of Physicians, Professor Grainger Stewart, and Professor Chiene also spoke.

THE LUNACY COMMISSIONERS' REPORT.

THE report of the Lunacy Commissioners is this year largely occupied with a discussion of the effect of recent legislation upon the work of their department. It seems to us that the Commissioners a little overestimate the public importance of this aspect of their theme. They point out that the additional reports for which the Act of last year provides will entail a large increase in the clerical work which has to be transacted in their office, and will

even add to the burdens which fall upon the Commissioners personally. It would, however, seem a simple matter to meet any such difficulty, if and when it arises, by strengthening the office, and we sincerely trust that considerations of economy will not be allowed to interfere with the full and efficient discharge of that supervision of the lunatic population which the Legislature has entrusted to the hands of the Commissioners. Of a somewhat different character are the remarks which are made in the report upon the prejudicial effect which the necessity for a judicial order to legalise the detention of a lunatic will have upon the treatment of the insane. For the view that many persons of disordered minds who would otherwise be brought early under treatment will, under this arrangement, be delayed in procuring admission to asylums there is very much to be said; but, on the other hand, it should be borne in mind that the law as it stood before 1888 cast such a very serious risk upon the medical man who certified lunacy that this circumstance alone had become a source of difficulty very real, and probably not less serious than that upon which the Commissioners remark. In view of this fact, we incline to think that the new regulations will not produce any marked effect upon the practice of society in dealing with its insane members. But it is eminently desirable that justices and the public should clearly understand that the object of detention is not simply the care of hopeless cases, but also, and no less, the cure of such as are curable. Insanity, like other disorders, is best treated in its early stages, and to delay recourse to asylum treatment until the hope of recovery is past is a very serious mistake.

The statistical returns which accompany the report tell very much the same tale as they have told for many previous years. The numbers coming within the jurisdiction of the Commissioners show a gradual increase, very nearly proportioned, so far as can be judged, to the growth of population. A notion has in recent years obtained currency that mental disease is much more prevalent now than it was at no distant date. Some increase, and even a considerable increase, the figures do show, but there is reason to think that the insane population is much more adequately enumerated in the present reports than was the case thirty or forty years ago. Making allowance for this circumstance, we find in these returns no evidence of any actual growth of mental disease.

METROPOLITAN ASYLUMS BOARD.

THE following are the rules and regulations under which the Metropolitan Asylums Board have opened the hospitals under their supervision to the medical students of London, in order to afford them facilities for the study of infectious diseases:—

GENERAL REGULATIONS.

1. No student shall be admitted to study at the fever hospitals without the authority of the Medical School to which he belongs.
2. No student shall be allowed to attend the fever hospitals before the end of the third year of his medical education, nor until he has held the offices of clinical clerk and dresser.
3. The minimum duration of the course of study shall be two months, the student being at liberty to attend at the hospital at least three days in each week. In order to obtain a certificate, he shall be required to attend not less than two days in each week during the whole period of two months.
4. The fee, which must be paid in advance to the Clerk to the Board, shall be three guineas for the first two months, and one guinea for each subsequent month.
5. The student, when so authorised by his school, shall attend at the office of the Metropolitan Asylums Board, bringing with him evidence of the authority required by Regulation No. 1.
6. The Asylums Board shall furnish him with a card, stating the hospital to which he will be attached, and the times at and during which he should attend.
7. A register shall be kept at each fever hospital, in which shall be entered the name and the school of the student and his attendances.
8. When the student shall have satisfactorily completed the course of study he shall receive a certificate to that effect from the Asylums Board, after it has been signed by the Medical Superintendent of the Hospital at which the student has attended.
9. The student, while within the hospital gates, shall in all respects be subject to the control of the Medical Superintendent of the hospital to which he is attached, and shall strictly obey the regulations made from time to time by the Asylums Board with regard to disinfection.
10. In the case of breach of discipline on the part of a student, the Medical Superintendent may suspend him from attendance at the hospital, and shall report the suspension at once to the Clerk to the Board, who shall report it to the Dean of the School to which the student belongs.

RULES AS TO DISINFECTION.

1. Every student will be required to wear, as long as he is within the hospital, a suit of brown holland overalls, consisting of coat, trousers, and cap, which will be provided by the Asylums Board.
2. As far as the hospital arrangements admit, three rooms shall be set apart for the students. The first, which the student reaches on entering the hospital (room A), shall be a cloak-room, in which he shall hang his outer clothing; the second room leading out of this (room B) shall be a lavatory; the third (room C), also in direct communication with the second, shall contain the hospital suit, which the student shall put on, and then pass direct into the hospital.

On leaving the hospital, the student shall enter room C and take off his hospital suit. Then, passing into the lavatory, he shall wash and disinfect his hands and face; after which he shall go into room A, resume his outer clothing, and at once quit the hospital.

3. Every student shall keep his hair cut short, and satisfy the Medical Superintendent that he is sufficiently protected against small-pox by vaccination or otherwise.

N.B.—The above Rules and Regulations shall apply, so far as may be practicable, to any qualified medical man who may be desirous of attending the course of study, and who shall obtain the consent of the Medical Superintendent of the hospital at which he may elect to study.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On Diphtheria and Croup in Stalybridge, by Mr. J. SPEAR.—Examination of the vital statistics for this district during the past ten years shows a high general mortality, a high infant mortality, an endemic prevalence of "fever," and a large increase in diphtheria and in "croup." In 1889 diphtheria is said to have been the cause of seven deaths, "croup" caused seventeen deaths, and four other deaths were registered from such diseases as laryngitis, tonsillitis, &c. The population is about 28,000. So far as diphtheria is concerned, the non-fatal attacks were but few; membranous croup, on the other hand, is not a notifiable disease in this district. Multiple deaths in the same households from so-called "croup," as also from that affection and from tracheitis, all point to a similarity of disease. The outbreaks were not commonly traceable to any one cause, but Mr. Spear notes that in a large proportion of cases it was observed that the infected houses were exposed through direct connexions with the sewers to the entrance of sewer and drain air. This relation of diphtheria to drain and sewer air is one which Mr. Spear adverts to in his reports very much more frequently than most other investigators of similar outbreaks; but something more than mere sewer and drain air must be needed to produce the result. Thus, Stalybridge, for example, had for years past been in a worse state in this respect than in 1889, and yet its mortality returns up to the end of 1888 show only two diphtheria deaths for nine years, and even the "croup" deaths were insignificant in number compared with those which occurred last year. And as to direct connexions between the interior of houses and sewers, no less than 1000 had been severed in five years preceding the inspection of the town, and yet it was after this that there came the mortality we have referred to. If these sudden onsets of diphtheria and allied throat affections be really due to drain emanations, and become prevalent in towns after, rather than before, improvements in drains and sewers have been effected, it must be owing to some condition which is either added to the drain effluvia, or to the operation of some other circumstances on the population, who are thereby made susceptible of an infection against which they were formerly more proof. If this additional condition or conditions could be made out, it would go far to clear up the etiology of this obscure disease, and to explain why it is only within a comparatively recent period that our large towns, where sewer effluvia have abounded, have been so much more free from diphtheria than rural areas where sewers are only occasionally found to exist.

Diphtheria and Fever in the Grays Subdistrict, by Dr. AIRY.—This subdistrict is included in the Orsett district, and has within it the Grays Thurrock urban area. During 1889 it had an excess of fever and of diphtheria, the rates per 1000 from these two diseases being 0·52 and 0·84 respectively, as compared with the corresponding rates 0·18 and 0·19 for England and Wales as a whole. The diphtheria caused 13 fatal cases in three quarters, nearly all the deaths occurring in the latter half of the year, and even

those recorded do not indicate the total, for the story as told by Dr. Airy is one of the many in which the true character of the first fatal attack appears to have passed unrecognised, and, the disease subsequently spreading, death resulted. This is, indeed, the main point of interest attaching to the history of the outbreak. But in dealing with the sanitary circumstances with which the disease was associated, it is evident that neglect of sanitary duty must be held to be, in part, responsible for the occurrences detailed. Thus it is stated, as regards Grays Thurrock, that, although in 1884 Mr. Spear had reported on the want of sewerage, that need still remains unsupplied, and the description given of various portions of the district shows how serious that want is. The outbreaks of fever, though not so fatal or sudden as those of diphtheria, have also in places been associated with defective conditions of drainage and otherwise.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5468 births and 3351 deaths were registered during the week ending July 19th. The annual rate of mortality in these towns, which had increased from 16·9 to 17·7 per 1000 in the preceding three weeks, further rose last week to 18·0. The rate was 17·9 in London and 18·0 in the twenty-seven provincial towns. During the first three weeks of the current quarter the death-rate in the twenty-eight towns averaged 17·7 per 1000, and was 2·2 below the mean rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 10·9 in Portsmouth, 11·9 in Derby, 12·1 in Oldham, and 12·4 in Hull. The rates in the other towns ranged upwards to 21·5 in Sheffield, 21·6 in Leeds, 21·8 in Newcastle-upon-Tyne, and 26·2 in Manchester. The deaths referred to the principal zymotic diseases, which had risen from 446 to 587 in the preceding three weeks, declined to 526 last week; they included 172 from diarrhœa, 159 from measles, 86 from whooping-cough, 55 from scarlet fever, 31 from diphtheria, 23 from "fever" (principally enteric), and not one from small-pox. No deaths from any of these diseases were recorded in Norwich, Wolverhampton, Blackburn, Preston, or Huddersfield; while they caused the highest death-rate in London, Plymouth, and Leicester. The greatest mortality from measles occurred in London, Birkenhead, Bradford, and Plymouth; from scarlet fever in Sheffield and Liverpool; from whooping-cough in Derby; from "fever" in Newcastle-upon-Tyne; and from diarrhœa in Leicester. The 31 deaths from diphtheria included 19 in London, 5 in Liverpool, 4 in Manchester, and 2 in Salford. No death from small-pox was registered in the twenty-eight towns; and no small-pox patients were under treatment at the end of the week, either in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of last week was 1414, against numbers increasing from 1067 to 1348 on the preceding eight Saturdays; the new cases admitted during the week were 159, against 150 and 153 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 244 and 225 in the preceding two weeks, further declined to 216 last week, but exceeded the corrected average by 34. The causes of 57, or 1·7 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Salford, Oldham, Sunderland, Newcastle-upon-Tyne, and in eight smaller towns. The largest proportions of uncertified deaths were recorded in Leicester, Liverpool, Sheffield, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 20·6 to 19·7 per 1000 in the three preceding weeks, further fell to 18·3 in the week ending July 19th, but slightly exceeded the rate which prevailed during the same period in the twenty-eight English towns. The rates in the eight Scotch towns ranged from 10·6 in Leith and 16·7 in Edinburgh to 21·0 in Dundee and 21·9 in Perth. The 474 deaths in the eight towns showed a decline of 35 from the number in the previous week, and included 31 which were referred to whooping-cough, 27 to measles, 11 to diarrhœa, 5 to scarlet fever, 4 to diphtheria, 1 to "fever," and not one to small-pox. In all, 79 deaths resulted from these principal zymotic diseases, against 76 and 86 in the preceding two weeks. These deaths were equal to an annual rate of 3·1 per 1000, which exceeded by 0·3 the mean rate last week from the same diseases in the twenty-eight English towns. The highest death-rates from these diseases were 4·2 in Aberdeen and 7·8 in Perth. The fatal cases of whooping-cough, which had been 24 and 38 in the preceding two weeks, declined again to 31 last week, of which 13 occurred in Glasgow, 6 in Aberdeen, 4 in Edinburgh, and 4 in Perth. The deaths from measles, which had been 28 and 24 in the previous two weeks, rose again last week to 27, and included 15 in Glasgow and 7 in Dundee. Of the 5 fatal cases of scarlet fever, 2 occurred in Leith and 2 in Paisley; and the 4 deaths referred to diphtheria included 2 in Edinburgh. The deaths referred to diseases of the respiratory organs, which had been 102 and 87 in the preceding two weeks, further fell last week to 76, but exceeded by 7 the number in the corresponding week of last year. The causes of 41, or nearly 9 per cent., of the deaths in the eight towns were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·1 and 21·3 per 1000 in the preceding two weeks, further declined to 20·7 during the week ending July 19th. During the first three weeks of the current quarter the death-rate in the city averaged 21·7 per 1000, the rate for the same period being 17·6 in London and 16·0 in Edinburgh. The 140 deaths in Dublin showed a decline of 4 from the number in the previous week; they included 5 which were referred to measles, 4 to "fever," 3 to whooping-cough, and not one either to small-pox, scarlet fever, diphtheria, or diarrhœa. Thus the deaths from the principal zymotic diseases, which had been 8 and 13 in the preceding two weeks, were 12 last week; they were equal to an annual rate of 1·8 per 1000, the rate from the same diseases being 3·6 in London and 1·7 in Edinburgh. The 5 fatal cases of measles corresponded with the number in the previous week. The deaths referred to different forms of "fever," which had been 3 and 4 in the preceding two weeks, were again 4 last week; and the 3 fatal cases of whooping-cough also corresponded with the number recorded in the previous week. The deaths both of infants and of elderly persons exceeded those returned in the previous week. Six inquest cases and 5 deaths from violence were registered during the week; and 46, or nearly a third, of the total deaths occurred in public institutions. The causes of 10, or more than 7 per cent., of the deaths were not certified.

THE SERVICES.

BENGAL MEDICAL ESTABLISHMENT.—To be Brigade Surgeons: Surgeon-Major Rajendra Chandra Chandra (dated Feb. 28th, 1890); Surgeon-Major Robert George Mathew (dated March 18th, 1890); Surgeon-Major George Massy (dated March 29th, 1890); and Surgeon-Major Geo. Cumberland Ross (dated April 30th, 1890).

MADRAS MEDICAL ESTABLISHMENT.—To be Brigade Surgeons: Surgeon-Major Daniel Fredk. Bateman (dated April 2nd, 1890), and Surgeon-Major Edwd. Forster Drake-Brockman (dated April 21st, 1890).

BOMBAY MEDICAL ESTABLISHMENT.—To be Brigade Surgeon: Surgeon-Major Geo. Archibald Maconachie, M.D. (dated May 1st, 1890).

INDIAN ARMY.—Brigade Surgeon Samuel Cornwallis Amesbury, Bengal Medical Establishment, (dated April 30th, 1890). The Queen has approved of the retirement from the Service of Brigade Surgeon Wm. Dymock, Bombay Medical Establishment, being post-dated to May 1st, 1890. The Queen has also approved of the resignation of Surgeon Arthur Rea Edwards, Bengal Medical Establishment (dated April 16th, 1890).

ADMIRALTY.—The following appointment has been made:—Surgeon Richard Miller to the *Cockatrice* (dated July 22nd, 1890).

VOLUNTEER CORPS.—*Artillery:* 1st North Riding of Yorkshire (Western Division, Royal Artillery): Surgeon

T. R. Pearson, M.D., to be Surgeon-Major, ranking as Major (dated July 19th, 1890).—*Royal Engineers* (Fortress and Railway Forces): 5th Volunteer Battalion, the Durham Light Infantry: The undermentioned Gentlemen to be Acting Surgeons:—Andrew Paige Arnold, M.B. (dated June 12th, 1890), and Robert Crosby, M.B. (dated June 12th, 1890).—2nd West Riding of Yorkshire (Leeds): Acting Surgeon J. Edwards resigns his appointment (dated July 19th, 1890).—*Rifle:* 1st Volunteer Battalion, the Royal Warwickshire Regiment): Thomas George McLauchlan, M.B., to be Acting Surgeon (dated July 19th, 1890).—1st Volunteer Battalion, the South Staffordshire Regiment: Charles Thomas Griffiths, Gent., to be Acting Surgeon (dated July 19th, 1890).—12th Middlesex (Civil Service): Acting Surgeon W. R. Tytheridge resigns his appointment (dated July 19th, 1890).

VOLUNTEER MEDICAL STAFF CORPS.—The London Division: Surgeon H. Huxley resigns his commission (dated July 19th, 1890).

Correspondence.

"Audi alteram partem."

MEDICAL LEGISLATION IN NEW YORK.

To the Editors of THE LANCET.

SIRS,—The intelligent interest exhibited by THE LANCET, which, no doubt, represents that of the profession in Great Britain and Ireland, in the progress of medical education in the United States leads me to offer to you some remarks based upon a leading article in your journal for July 5th. For the past two years, as a member of the Committee on Legislation of the Medical Society of the State of New York, in conjunction with my colleagues, Drs. Daniel Lewis and Maurice Lewi, I have had peculiar opportunities for observing what has been going on in our New York Legislature in reference to this important subject, and I am also very familiar with the work of preceding committees for the past ten years. It would be tedious to your readers to go over the whole subject, but the upshot of the legislation accomplished up to this time may be described. Until two years ago no preliminary examination of any kind was necessary to enter upon the study of medicine in the State of New York, and, for that matter, in most, if not all, of the States of the Union. The Legislature of our State, in 1889, at the instance of the secretary of the regents of the University of the State, a body having nominal control over educational matters, passed a law requiring a very simple examination preliminary to the study of medicine, involving only what is called among us a common school education. It is notorious that two at least of the twelve medical colleges of the State endeavoured to have this law repealed entirely, and it is suspected that innocent bills, with riders involving this repeal, were introduced at the instance of one of them. At any rate, such a Bill was introduced. To the credit of the Legislature, thanks to the efforts of the *Medical Record* and the secular press, this indispensable requirement of a preliminary examination was not repealed. It is regrettable that the law now allows this preliminary examination, in certain cases at least—I do not know whether in all; I think not—to take place during three years of professional study. In some instances it would be proper that this should be done, because the original law compelled South Americans, who generally speak only Spanish or English very imperfectly, to write and spell the English language. Since quite a contingent of South Americans—i.e., citizens of the various Republics of South America—and Cubans, as well as a few Orientals (Armenians), study medicine in the United States, they should be allowed a few months' grace for the English examination, or an equivalent in Spanish should be accepted. If, as the *Record* says, the law has been so modified as to allow illiterate English-speaking citizens of the United States to pass an elementary examination any time within three years after beginning the study of medicine, it is indeed a bad amendment, which the next Legislature should be asked to correct. That the Colleges are fully alive to their own interests in every particular is well shown by the fact that four of the twelve combined to prevent the repeal of the law which existed for a long period up to 1882, allowing *schools* teaching anatomy, among other subjects—e.g., dental schools, post-graduate medical schools,—to obtain as a right anatomical material from the bodies of unclaimed paupers in common with the medical colleges. It is probable that in this combination they were thinking more of their own supposed interests than of the increase of the facilities for general medical education in New York.

But the most important action of the Legislature of the State of New York that has been taken up to this time is that of which THE LANCET has not yet spoken. After 1891 no man (or woman) can enter upon the practice of medicine in the State, no matter what diploma he may have, unless he pass an examination conducted by an independent board of examiners, appointed by the regents of the University, from names sent into them by the Medical Society of the State (the representatives of the regular school of medicine), or by a board similarly selected from the Homœopathic Medical Society, or by one chosen from the Eclectic Medical Society. The regular profession struggled hard for years for one board composed, as in the Dominion of Canada and in the State of Virginia and other States of the Union, of a majority of regulars, with a minority representation of homœopaths and eclectics; but, thanks to the colleges of New York City, who at first resisted this, until the day for accomplishing the reform was past, we have been obliged at last to submit to a law constituting three boards of examiners. The homœopaths, when the regular colleges opposed any law, professed to be willing to accept one board, but when the reluctant colleges, with one exception, were at last willing to adopt the principle of an independent examining board, the homœopaths demanded and secured a separate board, in spite of the vigorous opposition of our committee. Acting on instructions from our Society, we laboured earnestly for the single board and for one standard, but without avail. The law has been carefully drawn, and was much modified in its passage through the Legislature. It is thought by many even of the regular profession that this law will improve the present condition of things, since it recognises the principle that while the colleges may grant degrees, the right to practise shall only be conferred by the State. If the law have no great defects which shall render it impracticable in working, it certainly will be an advance in a direction heartily desired by a vast majority of the profession in the United States.

The medical colleges in the State of New York consist of four regular ones in New York City, the College of Physicians and Surgeons, the Medical Department of the University, Bellevue Medical College for Women; the Homœopathic Medical College; and an Eclectic Medical College. In Brooklyn, really a part of New York City, as much as Southwark is of London, there is also the Long Island College; in Albany, the Albany Medical College; in Syracuse, nearly at the centre of the State, the medical department of the University; and in Buffalo there are two medical colleges. All these, except the Homœopathic and so-called Eclectic in New York City, are in full sympathy and relations with the regular profession. They are well equipped, especially those in New York City. Their professors are among the most distinguished men of the profession of the whole country, and they have done by far the most of what may have been accomplished in medical literature and hospital and laboratory work in our State, and I might almost say our country. They have usually been jealous of any interference by the State with their curricula or powers to grant the licence to practise, but they have finally, with one exception, given in their adherence to the principle, that the State should have the latter-named power. They are constantly increasing their facilities for study, and are elevating the standard of qualification for the degree of M.D., the only medical degree conferred in the United States. We have also in New York City two successful colleges for post-graduate medical study, and while it is true, unfortunately, that the degree of M.D. may be acquired with too little study, I know of no country where the intelligent and honest student may secure a better medical education.

I am, Sirs, very respectfully,

London, July 14th, 1890. D. B. ST. JOHN ROOSA, M.D.

THE OPHTHALMOLOGICAL SOCIETY AND HOMŒOPATHY.

To the Editors of THE LANCET.

SIRS,—I crave permission to call the attention of the medical profession, through your columns, to the recent action of the Ophthalmological Society with regard to homœopathy. I have delayed taking this step until after the publication, in your last number, of the report of the proceedings at the annual meeting of the Society, but I now feel that I can no longer maintain silence. If you will afford me space for a narrative of bare facts, it will not be necessary to encumber that narrative with any large amount of commentary.

Early in last May I was consulted about a patient who had been suffering for three years from a chronic and intractable form of eye disease, and who, after being under various treatment, had drifted into what is called "the Homœopathic Hospital." The "surgeon" to that institution, hereinafter described as "the homœopath," under whose care the patient was placed, performed upon him certain operations, of which I will say no more than that the patient did not discover that any benefit had resulted from them, and was unwilling to submit to further procedures of a similar kind. In this state of affairs the homœopath took him to the house of an eminent ophthalmic surgeon, a distinguished member of the Ophthalmological Society, and a member of the staff of a great London hospital and school of medicine. This gentleman, whom I will describe as "the consultant," submitted to consult with the homœopath, accepted (I believe) a fee for doing so, and sanctioned the return of the patient to the Homœopathic Hospital, there to undergo, at the hands of the homœopath, the further treatment which had been determined upon in the consultation.

I desire entirely to acquit the consultant in this case of any graver error than such as might arise from want of reflection; but I thought at the time, and I think now, that his action was unfair and wrong towards the patient, and that it was injurious to the honour of the profession. As regards the patient, I may mention that, although the consultant, as he has himself informed me, entirely condemned further operative measures, the homœopath immediately performed fresh operations, which the patient was led to believe had been sanctioned by the consultant; and further, that although the case was not one in which any ordinary practitioner would have expected benefit from the constitutional action of mercury, the patient, when he left the Homœopathic Hospital, was the subject of severe mercurial salivation. As regards the honour of the profession, a homœopath must surely be regarded as a person who either sincerely holds or fraudulently pretends to hold doctrines which appear to the great bulk of medical men to be as absurd as they are erroneous. In neither case can he be a proper person to meet in consultation. The act of consultation implies at least a tacit admission that the consultant regards the practitioner consulted with as a safe and proper guide in medical questions; and I think that, in the case of a homœopath, we are not justified in making any such admission. We do *not* believe him to be a safe and proper guide; and we have no moral right to do any act which is calculated to deceive the public with regard to this important matter. The fact that a gentleman of the eminence of the consultant in this case submitted to meet a homœopath would be tantamount, in the estimation of many people, to a declaration that the consultant in question looks upon what is called homœopathy as a legitimate or defensible course of professional proceeding.

Feeling very strongly the pressure of these considerations, and being earnestly desirous to wipe away the stain of association with homœopathy from the department of practice in which I am engaged, I wrote a letter to one of the secretaries of the Ophthalmological Society, in which, without mentioning any names, I related the circumstances above set forth, and added that, "*if the Council saw fit*," I would, at the approaching annual meeting, move as a resolution that, "in the opinion of this Society, it is inexpedient and improper for its members to engage in professional consultations with avowed homœopaths, or with persons holding office in homœopathic institutions." The suggested resolution was so framed as expressly to exclude cases in which a consultant might meet a homœopath without knowing him to belong to the sect. The secretary acknowledged the receipt of my letter, and said that it would be brought before the Council at their meeting on June 12th.

In these circumstances it appears to me that there were two courses, either of which it might have been proper for the Council to pursue. Assuming that they approved of the suggested resolution, they might have given facilities for its being proposed and discussed; assuming that they disapproved of it, or were of opinion that a discussion upon it might be injurious to the interests of the Society, they were entitled, by my words "if the Council see fit," to ask me to abandon the intention of bringing it before the meeting. The course they actually pursued was one which, prior to experience, I should have thought impossible. They passed the following resolution: "That Mr. Carter's motion be brought before the ensuing annual general meeting of the Society, with a statement of opinion on the part of the Council that the question mentioned in it is a general ethical one on which the Society is not called upon to express a separate opinion." The secretary, in communicating to me this resolution, wrote: "*Your motion*, with this resolution appended, will therefore *appear in the agenda* of the annual meeting of Friday, July 4th."

To my great surprise, when the circular convening the meeting reached me, my motion did not "appear in the agenda." The circular said that "the special business would be to receive the report of the Council, which includes the following points." Three "points" were then mentioned, and were followed by the annexed words: "4. A motion by Mr. Brudenell Carter *as to consultations with homœopathic practitioners*, with *an expression of opinion* on the point by the Council." Not the slightest clue was given as to the nature of my motion, nor as to the nature of the opinion which the Council were about to express.

If these two matters had been made known to the members of the Society, I am inclined to think that the attendance at the meeting would have been larger than it was. There were not many members present, and, among these, the Council was fully represented. By a piece of ingenuity which I will leave others to characterise, my intended resolution was quoted in the general Annual Report of the Council, together with the recommendation that it should not be passed, and then the adoption of the report as a whole was moved and seconded. Such adoption, evidently, would have condemned my resolution by a side wind before it was moved, and I was therefore compelled to move it as an amendment to the report, and thus to place myself in the position of direct antagonism to the Council, which had been not unskilfully prepared for me. I moved my resolution; it was seconded, and then followed a short period of absolute stillness. No one thought fit directly to oppose the Council by supporting me; no one, either within or outside the Council, dared—I use the word advisedly—to support the Council in their tacit acceptance of homœopathy. The question was almost immediately put, and my seconder and I were, I believe, alone in voting for the amendment. Some customary votes of thanks were passed, I intimated my resignation of membership to the secretary, and the proceedings terminated. I ought, perhaps, to add that the secretary interposed when I was speaking, in order to assure me that the suppression of the terms of my resolution, and of the recommendation hostile to it, had been his personal act, done not only without instructions from the Council, but without any intention of concealment. I fully accept his statement, but may perhaps be excused if I attach more importance to facts than to motives. The story is completed by mentioning that, in your report of the proceedings of the meeting, a report which I presume to have been "communicated,"[1] you say only that "*an amendment*, moved by Mr. Brudenell Carter, and seconded by Mr. Frost, was lost." There is no clue to the nature of this amendment or to the subject with which it dealt.

I venture to think that this narrative will afford to members of the medical profession some materials for reflection, and I do not believe that the amiable tolerance of homœopathy displayed by the Council of the Ophthalmological Society will be ratified by the general opinion. If the Council had requested me, as they might have done, to withdraw my notice of motion, their action might have been viewed merely as an example of what has been

[1] The report was supplied to us in the usual course by the gentleman appointed by us for the purpose.—ED. L.

happily described as "cowardice masquerading as discretion"; but the care which they took to have the motion brought forward, the fact that neither its nature nor that of their own hostile recommendation was made known to the members of the Society, the conspiracy of silence when the motion was proposed, and the device which was adopted to secure its rejection,—these things taken together appear to me to amount simply to an advertisement, intended to make it known, in "homœopathic circles," that some ophthalmic surgeons are ready to sell themselves to homœopaths for a sufficient consideration, and, at the same time, so contrived as to avoid giving unnecessary publicity to the fact in "circles" of a wider character. A distinguished member and office-bearer of the Society, not the original consultant, but, like him, surgeon to a great London hospital, and a teacher in its medical school, said to me after the meeting that he had not supported me because he should "feel bound" to consult with any homœopath who brought him a cataract case. As far as I am aware, this gentleman does not recognise any indefeasible right, on the part of a patient with cataract, to be operated upon by any surgeon whom he may choose, and upon his own conditions—as, for example, without fee; and if he does not recognise such a right, if he claims to lay down his own conditions with regard to remuneration, or with regard to the place where the operation is performed, he is surely equally entitled to claim exemption from the degradation of submitting to consult with a person whom he cannot believe to be a trustworthy medical adviser. The excuse, when we look at it closely, is no more than a plea, on the part of whoever may advance it, for permission to put his conscience in his pocket; and, so long as such a plea is admitted, we cannot expect the public to believe that our opposition to homœopathy rests upon any valid ground either of science or of morals.

I am, Sirs, your obedient servant,

R. BRUDENELL CARTER.

Queen Anne-street, W., July 19th, 1890.

THE STORY OF THE INTRODUCTION OF CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—As I see, by an annotation in THE LANCET of to-day, that the early history of the introduction of chloroform is exciting attention, it has occurred to me that a reproduction of the account of the events of the evening when the first decisive experiment was made with it might prove interesting to your readers. I take it from a pamphlet published in November, 1848, by the late Professor Miller of Edinburgh. This pamphlet, entitled "Surgical Experience of Chloroform," consists of three lectures delivered by the Professor at the commencement of the session 1848-9. After referring to the enthusiasm excited by the subject of anæsthesia, of which the "first sound had come from across the Atlantic," Mr. Miller writes as follows:—

"But a new phase was at hand. My friend, Dr. Simpson, had long felt convinced that some anæsthetic agent existed superior to ether; and in the end of October, 1847, being then engaged in writing a paper on Etherisation in Surgery, he began to make experiments on himself and his friends in regard to the effects of other respirable matters—other ethers, essential oils, and various gases; chloride of hydrocarbon, acetone, nitrate of oxide of ethyle, benzin, the vapour of iodoform, &c. The ordinary method of experimenting was as follows. Each 'operator' having been provided with a tumbler, finger glass, saucer, or some such vessel, about a teaspoonful of the respirable substance was put in the bottom of it; and this, again, was placed in hot water, if the substance happened to be not very volatile. Holding the mouth and nostrils over the vessel's orifice, inhalation was proceeded with, slowly and deliberately; all inhaling at the same time, and each noting the effects as they advanced.

"Most of these experiments were performed after the long day's toil was over—at late night or early morn, and when the greater part of mankind were soundly anæsthetised in the arms of common sleep. Late one evening—it was Nov. 4th, 1847,—on returning home after a weary day's labour, Dr. Simpson, with his two friends and assistants, Drs. Keith and J. M. Duncan, sat down to their somewhat hazardous work in Dr. Simpson's dining-room. Having inhaled several substances, but without much effect, it occurred to Dr. Simpson to try a ponderous material, which he had formerly set aside on a lumber table, and which, on account of its great weight, he had hitherto regarded as of no likelihood whatever. That happened to be a small bottle of chloroform. It was searched for and recovered from beneath a heap of waste paper, and, with each tumbler newly charged, the inhalers resumed their vocation. Immediately an unwonted hilarity seized the party; they became bright-eyed, very happy, and very loquacious, expatiating on the delicious aroma of the new fluid. The conversation was of unusual intelligence, and quite charmed the listeners—some ladies of the family and a naval officer, brother-in-law of Dr. Simpson. But suddenly there was a talk of sounds being heard like those of a cotton mill, louder and louder; a moment more, then all was quiet, and then—a crash. On awaking, Dr. Simpson's first perception was mental—'This is far stronger and better than ether,' said he to himself. His second was to note that he was prostrate on the floor, and that among the friends about him there were both confusion and alarm. Hearing a noise, he turned round and saw Dr. Duncan beneath a chair, his jaw dropped, his eyes staring, his head bent half under him, quite unconscious, and snoring in a most determined and alarming manner. More noise still, and much motion. And then his eyes overtook Dr. Keith's feet and legs making valorous efforts to overturn the supper table, or more probably to annihilate everything that was on it; I say more probably, for frequent repetitions of inhalation have confirmed, in the case of my esteemed friend, a character for maniacal and unrestrainable destructiveness—always under chloroform in the transition stage. By and by, Dr. Simpson having regained his seat, Dr. Duncan having finished his uncomfortable and unrefreshing slumber, and Dr. Keith having come to an arrangement with the table and its contents, the *sederunt* was resumed. Each expressed himself delighted with this new agent, and its inhalation was repeated many times that night, one of the ladies gallantly taking her place and turn at the table, until the supply of chloroform was fairly exhausted. In none of these subsequent inhalations, however, was the experiment pushed to unconsciousness. The first event had quite satisfied them of the agent's full power in that way."

Search, Mr. Miiler goes on to say, was then made among chemical authorities to find the best formula for making more chloroform. This was found, and the same morning Mr. Hunter, of the firm of Duncan and Flockhart, was pressed into the service of restoring the supply. He then tells us that early in November Dr. Simpson, who had not yet had an opportunity of trying it in the surgery, went over to the Royal Infirmary, when it so happened that three minor operations were set down for that day, two by himself and one by the late Dr. John Duncan. The first, by Professor Miller, was the removal of the whole of the radius in the state of sequestrum; the second was an operation of a painful nature on the face of a soldier; and the third, by Dr. John Duncan, was the amputation of "a doomed toe of extreme sensitiveness to touch." Each operation was perfectly painless, and in all three the amount of chloroform used was under half an ounce.

Some twenty years ago I had a letter from the late Mr. Walker, a chemist in Conduit-street, explaining Mr. Waldie's connexion with the trial of chloroform. It seems that in 1847 Mr. Walker was in business in Liverpool as a pharmaceutical chemist, and Mr. Waldie was the analytical chemist to the Liverpool Apothecaries' Company. One evening several friends met at Mr. Walker's house to make some anæsthetic experiments with ether, Mr. Waldie being the operator. They were apparently not very successful, and were followed by headache and sickness. Mr. Walker then suggested that as chloric ether, when administered internally, was preferred to sulphuric ether in many cases because of its not producing sickness and headache, no doubt it would prove a better anæsthetic, and if found not to be strong enough, chloroform, from which it is made by dilution with alcohol, would certainly have the same properties, and should be tried. This Mr. Waldie named to Dr. Simpson when in Edinburgh a month later, who lost no time in procuring the chloroform, with which the experiments narrated by Professor Miller were made.

I am, Sirs, yours faithfully,

July 19th, 1890. A. C. P.

"EVIDENCE OF NURSES AT THE LORDS' COMMITTEE ON HOSPITALS."

To the Editors of THE LANCET.

SIRS,—The attention of the House Committee of the London Hospital has been called to a letter in THE LANCET of the 12th inst., signed by Mr. E. Hooper May, F.R.C.S. I have been directed to ask you to be so kind as to state in your next issue that Mr. May, having been applied to, very courteously forwarded the name of the "probationer" who was, he said, summarily dismissed. Mr. May was further kind enough to explain that the lady in question belonged to a nursing institution for which the hospital sometimes trains nurses. The lady was therefore not a probationer of the London Hospital, and could never have been dismissed by the hospital authorities.

I am, Sirs, yours obediently,
G. Q. ROBERTS, Secretary.

London Hospital, Whitechapel-road, July 22nd, 1890.

THE STING OF THE HONEY BEE.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to say a word or two about the sting of the honey bee? A few days ago I was told by a gentleman of the greatest veracity, who as a matter of pleasure keeps bees, that in consequence, he believes, of previous inoculation by bee stings, he is proof against pain—that is, he does not feel pain when stung by the insect. Fifteen years ago, when this gentleman began his favourite pursuit, he suffered severe pain in the parts stung, but for several years past the sting of the bee has produced only a little pleasurable sensation, which continued for a few seconds and then ceased. I may say that the gentleman is not pain-proof against the sting of the wasp, for, when stung by one of these formidable insects a short time since, his sufferings were acute and prolonged. But it might be that after a few repetitions the sting of the wasp might cease in him to produce its stinging effects. I therefore made the suggestion that, for the sake of science, he should take the matter up and thoroughly investigate it, in order that he might discover whether he could not also fortify himself against the pain caused by the sting of the wasp. This he declined to do, his thirst for science not being sufficiently great to induce him to have any further intercourse with a wasp if he could help it.

I am, Sirs, truly yours,
Lincoln, July 22nd, 1890. WILLIAM O'NEILL, M.D. &c.

MONOPOLY OF HOSPITAL APPOINTMENTS.

To the Editors of THE LANCET.

SIRS,—In your leading article of last week on the above subject, the following paragraph occurs: "Mr. Stewart ..... holds the Fellowship of the Royal College of Physicians of Edinburgh. He did not testify to the severity of the ordeal by which this latter title was attained, though evidence would have been helpful to the main purpose of his argument."

Permit me to say that I would have done so had I not been stopped in the middle of my speech by the application of the "ten minutes' rule"—a rule which had never before, in my experience, been applied to the mover of a resolution. I was on the point of stating, when "time" was called, what I now assert without fear of contradiction—namely, that the examination for the diploma of M.R.C.P.Ed. is quite as searching in every particular as that for the corresponding London diploma. As regards the practical part of the examination, the ordeal, indeed, is a more severe one. Moreover, I intended drawing attention to the fact that this ordeal had to be gone through by 85 per cent. of those admitted to the Membership of the Edinburgh College during the quinquennial period ended last December, and that the remaining 15 per cent. were all over forty years of age, all, with a solitary exception, being either honorary physicians to general hospitals or medical superintendents of public asylums. I would have asked whether the number of exemptions had been equally few for the London diploma during the same quinquennial period. But it is important to note that we did not ask that the latter—those admitted to membership of a college without examination—should be eligible for a hospital appointment. To us (the consulting staff and myself) it seemed that the precaution referred to would sufficiently safeguard the Committee of Election from the possibility of having before them any candidate except one of exceptional merit.

But this part of my argument, as well as my contention on behalf of the Members and Fellows of the Irish College of Physicians, I was unable to put before the governors, owing to the very unusual circumstance already referred to.

I am, Sirs, yours faithfully,
JAMES STEWART, B.A., F.R.C.P. Ed.

Clifton, July 22nd, 1890.

FEES UNDER THE NOTIFICATION ACT.

To the Editors of THE LANCET.

SIRS,—In the case of the second fee obtained by Mr. Kesteven under the Infectious Diseases Notification Act, you say that Dr. Watson saw the patient *for* Mr. Kesteven. Surely if one medical man kindly sees a patient suffering with infectious disease for another, both practitioners can hardly claim a notification fee; if they have a legal right so to do, such action on their part will not redound to their credit in the eyes of the public, for it seems to me that under a pretext of this kind an unscrupulous practitioner might, through his qualified assistant, perpetrate a wholesale fraud on the public by charges for unnecessary notification certificates.

I am, Sirs, yours truly,
MAJOR GREENWOOD, MD.

Hackney-road, N.E., July 19th, 1890.

*** Dr. Greenwood undoubtedly seizes the most plausible objection to Mr. Kesteven's view, but the inexorable words of the Act still remain, "Every medical man" &c. and the Local Government Board very emphatically express their opinion that they justify the view taken by Mr. Kesteven.—ED. L.

M. PASTEUR AND HYDROPHOBIA.

To the Editors of THE LANCET.

SIRS,—I am anxious that this refutation of Dr. Dolan's misstatement of my opinions should receive publication in a scientific journal like yours, as I have neither time nor inclination to answer them in a merely popular review. Hoping that you can find space for it,

Believe me yours truly,
Park-street, Grosvenor-square, W. VICTOR HORSLEY.

80, Park-street, Grosvenor-square, July, 1890.

SIR,—My attention has been drawn to a popular article on "M. Pasteur and Hydrophobia," written by you in the *Contemporary Review* for July, 1890. I took the trouble to correct, in the *British Medical Journal*, in September, 1886, numerous erroneous statements which you published on the same subject, and am consequently surprised to see them reappear, to the easy misleading of a public imperfectly educated in medical and scientific matters. That such a republication of statements, the incorrectness of which has been demonstrated, has not occurred unintentionally, is unfortunately made unmistakably clear by the manner in which you have taken isolated portions of my evidence before the House of Lords' Committee to support your contentions. On Feb. 13th, 1889, I read a paper on the subject before the Epidemiological Society. You were present. I therein proved that the death-rate of those bitten by unquestionably rabid dogs was 15 per cent., whereas the death-rate among the same class of patients when treated by M. Pasteur was less than 1·6 per cent.

You quote (p. 92) general statements of mine in which I explained to the House of Lords' Committee that a very large proportion of human beings who are bitten by rabid dogs do not become rabid, but I would ask why, in this connexion, you have suppressed the facts stated above, and instead of the whole truth have only given a part, which thus presented alone is most misleading. I will only conclude by inviting you to repeat your misstatements in a medical journal or before a medical or scientific society, where they can receive the correction they so urgently need, instead of before a public necessarily ignorant upon such matters.

Faithfully yours,
T. M. Dolan, Esq., M.D. VICTOR HORSLEY.

A NEW OPERATION FOR PROLAPSUS OR PROCIDENTIA OF THE RECTUM.

To the Editors of THE LANCET.

SIRS,—It was with much interest that I read in your issue of July 19th, 1890, Brigade-Surgeon K. McLeod's paper on the treatment of procidentia, and am glad he has carried out successfully in an ordinary case a mode of treatment I suggested when editing my father's book on Diseases of the Rectum in 1888. On page 187 I wrote as follows: "As it

is sometimes impossible to cure this third condition by the application of the cautery, it has occurred to me to make a small incision through the anterior abdominal wall on the left side, just above the outer third of Poupart's ligament. I would then introduce the fingers into the abdomen, catch hold of the rectum, and pull it up. When it has been pulled up as high as possible—in fact, sufficiently to straighten the rectal tube, and so remedy the procidentia—I should then pass a silk thread through the mesentery, and fasten the latter to the abdominal wall. I would next close the wound after the method pursued in abdominal section. By such a procedure I should hope that a firm adhesion would be formed, and that the upper part of the rectum would be prevented from becoming intussuscepted into its lower portion." By the third variety of procidentia I mean those cases in which the upper part of the rectum prolapses into the lower part, but never comes outside the anus. Since I wrote these suggestions I have not seen a case necessitating such an operation. With regard to the treatment of the ordinary cases of procidentia—that is to say, when the mass comes outside the anus—I have complete faith in the linear cauterisation if properly done, and do not think there is any necessity for wholesale amputation of portions of gut as is recommended by some surgeons.

I am, Sirs, your obedient servant,

July, 1890. HERBERT WM. ALLINGHAM.

ETHER *v.* CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—In your issue of the 5th inst., Mr. H. Chester Nance, in his letter "Ether *v.* Chloroform," states that "ether always gives warning of danger, whereas under chloroform there may be sudden death." If Mr. Nance will refer to page 143 of my book, "Anæsthetics, Ancient and Modern," he will find recorded a case of sudden death during etherisation: "the man died almost as if struck by lightning."

I am, Sirs, yours truly,

Lower Gardiner-street, Dublin. GEORGE FOY.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Fatal Revolver Accident.

IN reference to the notice in THE LANCET of July 12th of a case of careless handling of a loaded revolver with a feared fatal result, I learn that the unfortunate man died after a short interval. The coroner's jury returned a verdict of "Accidental Death," a result fully borne out by the evidence. A painful feature of the case was that the man whose handling of the revolver caused the fatality and the deceased were shortly to have become relatives by marriage.

Deaths from Chloroform.

Two deaths have recently occurred while under the influence of chloroform in two of the local public institutions. While, on the one hand, it is very important that all details of such cases should be fully known, it is not desirable that such details should be unnecessarily paraded before the public. It will suffice, therefore, to observe that in each case an inquest was held and a post-mortem examination made, that every possible care was taken to avert a fatal issue, and that a verdict exonerating the surgeon and administrator from all blame was returned in each case.

The New Mortuary.

The newly erected mortuary, to which will be conveyed all the bodies removed from the river, canal, and docks, from the streets and elsewhere within the city boundary, is now fully completed, and its opening is only a question of days. It may be some encouragement to those who are trying to procure similar buildings in their respective localities to persevere in their efforts, since they are not likely to meet with so much opposition as has been successfully overcome here. Local circumstances made the desired change peculiarly difficult, and it is only after unremitting effort that the new mortuary has been at last completed.

Liverpool, July 22nd.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The University of Durham and the International Medical Congress at Berlin.

I HEAR that the University of Durham has decided to send delegates to the Berlin meeting of the International Medical Congress, and has appointed Dr. James Murphy of Sunderland, Dr. Frederick Page, and Prof. Thomas Oliver of Newcastle to proceed to Berlin and attend the Congress.

Bequests to Newcastle Charities.

The local papers state that the will of Mr. John Clayton, many years town clerk of Newcastle, and who died last week at the advanced age of ninety-nine years, although not yet proved, provides the following:—To the Newcastle Infirmary, £500; Newcastle Dispensary, £200; Prudhoe Convalescent Home at Whitley, £200; Philipson Memorial Orphanage, £200; and the Abbot Memorial Orphange for Girls, £200.

The Langholm Hospital.

I understand that advices from New York state that the will of Mr. Thomas Hope, who left about £80,000 to establish a hospital in Langholm, of which town Mr. Hope was a native, is to be contested, as a nephew of Mr. Hope has instituted proceedings to set aside the will on the ground that the provisions for the hospital are too vague and indefinite, and confer powers beyond what the United States law allows.

Action against the North-Eastern Railway.

An action for compensation was brought against the North-Eastern Railway for injuries arising out of the Ryhope accident at the Durham Assizes last week. The case had some points of medico-legal interest, and was shortly as follows:—The plaintiff, a girl aged fourteen, had her right leg broken, and was admitted into the Sunderland Infirmary, and the leg remained in splints for six weeks. When they were removed, it was found that no union had taken place, so it was put up again in a plaster-of-Paris bandage for three weeks, and there was still no union. Ultimately it was found necessary to amputate the limb, which was then found to be fractured in three places. Altogether she was 164 days in hospital. The company admitted negligence. The jury assessed the damages at £1050, and judgment for this, with costs, was given. The judge further directed that the company should pay the plaintiff £75 forthwith, to meet the expenses she had to discharge in connexion with the accident, the residue to be paid into Court for investment for the girl's benefit.

Death of a Morpeth Benefactor.

Mr. R. W. Hollon, J.P., of York, and Lord Mayor in 1865, died in that city on Tuesday, the 15th inst., at the advanced age of eighty-two. Mr. Hollon was well known in the north to the profession as the head of the firm of wholesale druggists, Messrs. Hollon and Slinger; but he will be chiefly remembered as a benefactor to Morpeth, with which ancient town his late wife was intimately connected. In 1881 he transferred to the Town Council the large sum of £7000 to found an annuity fund for poor aged people of the borough. This fund now yields £10 a year each to twenty-five aged persons, besides presents at Christmas to the annuitants and to the general poor. Mr. Hollon's interment took place in Newcastle on Saturday last, and was attended by the Mayor of Morpeth and the Town Council, six of the annuitants, and several members of the medical profession. It should be mentioned that the Town Council of Morpeth in 1885 erected a drinking fountain in the market-place to commemorate his name and munificence.

Silloth.

Many improvements have taken place at Silloth lately, all tending, as the local papers say, to increase its popularity as a health resort. The North British Railway have constructed a wooden roadway in order that bathers may more readily reach the sea, and the road from the bank to the beach has also been recently levelled and improved. Altogether a good season is expected at Silloth, which has been long known as one of the healthiest spots on the shores of the Solway.

Northern Sunday Hospital Demonstrations.

Favoured by the weather, very successful Sunday Hos-

pital demonstrations took place at Stockton and North Ormesby last Sunday, the workmen and their Friendly Societies attending in large numbers. At Stockton the Mayor, in his chain of office, led the procession, and good collections were taken in the streets and halls.

Newcastle-on-Tyne, July 23rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

EDINBURGH.

County Councils and Medical and Sanitary Inspectors.

THE Board of Supervision have sent to the County Councils in Scotland a letter which was addressed in the first place to the Lanarkshire County Council. A deputation from that Council requested the Board "to give some assurance that (on the understanding that the County Council and District Committees, in organising their arrangements under the Public Health Act, shall, so far as they deem this can be judiciously done, employ members of the existing medical and sanitary staff in their respective districts) the Board of Supervision will agree to the services of the remaining officers being dispensed with, on the footing of their receiving compensation for loss of office in terms of the Local Government Act." The Board, having taken the opinion of counsel, state they are advised that, looking to the reorganisation which is contemplated by the Local Government Act, it is their duty to facilitate the reorganisation by consenting to the removal of any existing officer on being satisfied that his office is unnecessary. The Board must satisfy itself upon this matter in each case, giving due weight to the averment of the local authority, but applying its own mind to a consideration of the circumstances. The Board therefore intimates that it will be prepared to decide whether the services of any existing officer can be dispensed with, on the ground that he is incompetent, or that the office which he holds has become unnecessary, or that some other good reason exists for no longer continuing his services; and that any officer removed on the ground that the office he holds has become unnecessary, or that its abolition is required in the public interest, will be entitled to compensation in terms of the Local Government Act.

The University Examinations.

The second professional examinations finished last week, and the first professional commenced this week, Monday and Tuesday being devoted to the written part of the examination.

The Students' Representative Council.

It may not be generally known that the Students' Representative Council some time ago took into its own hands a journal entitled *The Student*, which had been started by the enterprise of a student who was well known about the school in his time. It is devoted to the news and gossip of the school and other matters of interest to the students. It is satisfactory to know from the committee of the Council in charge of it that it is paying its way. They claim to have a weekly circulation of from 700 to 800 during the summer and 1200 during the winter.

The New Royal Edinburgh Asylum.

The commemoration stone of the new buildings for this asylum was laid last week by the Earl of Stair, one of the deputy governors of the institution. The erection of these buildings has been rendered necessary from the great extension of the city, the present asylum being much overlooked by the recently-built houses around it. The buildings are to cost £66,000.

Health of the City.

The death-rate last week was 16 per 1000. Out of the total of 81, diseases of the chest accounted for 15 deaths, and zymotic causes for 6. The intimations for the week included 10 cases of typhoid, 6 of diphtheria, 20 of scarlatina, and 38 of measles.

St. Andrews Ambulance Association.

A meeting of the subscribers of this Association was held on Monday, under the chairmanship of Sir Thomas Clark. The secretary reported that in the Edinburgh centre the number of pupils instructed during the year was 735. The number of patients removed by the Association's waggons was close upon 400. The chairman referred to the increase in the work the Society was doing, and also to the value put upon the ambulance work by the police.

Edinburgh, July 23rd.

ABERDEEN.

The University of Aberdeen and the Medical Congress.

The Senatus Academicus has appointed Professors Hamilton, Hay, and Reid to act as delegates representing the University of Aberdeen at the approaching International Medical Congress to be held in Berlin.

Aberdeen Royal Infirmary.

Changes in the surgical staff of the Royal Infirmary have followed Dr. Ogilvie Will's retirement. Dr. Garden has been appointed second surgeon, and Dr. John Hall has been promoted to the office of third surgeon. This makes a vacancy in the office of junior surgeon, and several gentlemen are mentioned as probable candidates.

Health of the City.

In his report for the month of June, Dr. Hay states that 311 cases of zymotic diseases were notified, as against 418 in the previous month. There were 232 cases of whooping-cough, but fortunately, though the disease is still as prevalent as it was in May, the proportion of deaths is lower, being 1 in 13, as against 1 in 8 in May. The epidemic of measles is rapidly declining, both in extent and virulence; only 50 cases, with 1 death, were reported last month, as against 169 cases, with 11 deaths, in May. There were 18 cases of scarlet fever reported in June, and unfortunately, as far as the present month has gone, the disease is gaining ground, and threatens to become epidemic. In endeavouring to discover the origin of this outbreak, it was discovered that a child who had been attacked with scarlet fever at Ballater had travelled by rail to her house in Aberdeen soon after the rash had disappeared, but while her skin was peeling; and also that, once at home, she was allowed by her parents to go out and mingle freely with neighbouring children. The sanitary inspector instituted an action against the parents of the child and against the parties in Ballater, who were responsible for sending the affected child in a public conveyance to Aberdeen, and a conviction was obtained i both cases.

Unwholesome Food.

During the month of June, 1064 lb. of beef, 20 lb. of mutton, and 31,759 lb. of fish were seized by the sanitary inspector and destroyed as being unfit for human food.

Aberdeen, July 22nd.

DUBLIN.

(FROM OUR OWN CORRESPONDENT.)

Monopoly of Hospital Appointments.

SOONER or later the absurd restrictions in some pa England, rendering ineligible for hospital appointments Fellows of the Irish and Scottish Colleges of Surgeons, will be removed, and exclusive dealing of this kind, which has no justification, be abandoned for a more liberal course on the part of some hospital authorities. The rule (and I believe there is no exception to it) that exists in Dublin for all hospital appointments is that no candidate is debarred from being elected because he may not be the holder of an Irish diploma. On the contrary, several gentlemen holding no Irish medical qualification are attached as physicians to some of the hospitals in Dublin. As regards infirmaries, I am not sure whether the same rule exists, but there is only one infirmary in Dublin (the Meath Hospital), and although formerly it was illegal to elect a surgeon who did not hold the licence of the Irish College of Surgeons, by Mr. Gibson's Act this rule was rescinded, and a licentiate of any College of Surgeons is now eligible for the post. Indeed, one of the visiting surgeons of that institution does not hold any Irish surgical qualification.

Board of Superintendence of Dublin Hospitals.

The thirty-second annual report, for the year ending March 31st last, of the Dublin hospitals which receive

grants from Parliament has now been issued. These institutions number nine, three being general and six special hospitals, and the money allocated amounts to £15,722 15*s.* 9*d.* There were 9335 patients admitted during the year, of whom 8972 left the wards either cured or relieved, or were discharged, and 432 died. Exclusive of incurables, the mortality was equal to 4·32 per cent. on those treated to a termination. A Royal Commission having expressed the opinion that all hospitals which receive assistance from the State ought to afford medical instruction, the governors of the Westmoreland Lock Hospital endeavoured to give effect to this recommendation, but found it impracticable, owing to the objection entertained by the patients to the presence of students. It has, however, been suggested—and the idea seems a useful one—that the hospital in question might fairly be utilised for post-graduate instruction. Objections have been made to the Parliamentary grant being continued, but the Board state that hospitals for the exclusive treatment of venereal diseases differ essentially from general clinical hospitals, being maintained rather as a protection to the naval and military services and the public generally than as institutions for the relief of the sick poor. During the year a new sanitary annex to the wards of Steevens' Hospital has been in process of construction at a cost of £210. This is the only general hospital in Dublin which has a special ward for venereal diseases. At the Rotunda Lying-in Hospital improved sleeping accommodation for the nurses and ward-maids will shortly be provided, while it is contemplated to erect a lift for helpless patients. The Board hope the Auxiliary Hospital may be reconstructed, as, considering the structural defects, and the great strain on its accommodation, no proper sanitary conditions can exist. The mortality of the labour patients was 0·62 per cent., which contrasts favourably with a similar return of the Coombe Lying-in Hospital, where the rate was as high as 3·72 per cent. The ward space at St. Mark's Ophthalmic Hospital is not sufficient, and although no death occurred during the year, yet imperfect ventilation must lower the vitality of patients, retard their recovery, and often hazard the result of surgical operations. The average annual cost per bed for maintenance varied from £12 13*s.* 4¾*d.* (Westmoreland Lock) to £29 18*s.* 5*d.* (Steevens'); while the average annual cost per bed for maintenance and for establishment charges, exclusive of buildings and furniture, was as high as £70 8*s.* 8½*d.* at Cork-street Fever Hospital, and as low as £27 17*s.* 9½*d.* at the Hospital for Incurables.

Richmond District Lunatic Asylum.

The admissions last year reached the high figure of 482, the greatest number since the establishment of the asylum. Mr. Norman, the resident medical superintendent, refers in his annual report to the unsatisfactory and defective manner in which lunatics are admitted, as tending to throw additional trouble on the medical staff, and to hinder the proper treatment of recent cases. Mr. Norman calls attention to the large proportion of cases of phthisis and of zymotic diseases which are admitted.

Catholic University Medical School.

A deputation from the medical faculty waited on the Roman Catholic Archbishop of Dublin last week to learn if any steps could be taken to provide the faculty with a school of medicine structurally adequate for the purposes of medical teaching. The archbishop, in reply, held out no hope of encouragement for the department to expect any help from him from the funds of the University, and thought it was a duty which lay with the State.

Poisonous Fungi.

A little boy died at Clondalkin, near Dublin, a few days since, from eating some poisonous fungi, which he found in a field. Although medical advice was obtained, he died four days afterwards.

Dublin, July 22nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Suicides in France.

SOME curious and interesting observations have recently been published on suicides in this country. From 1827 to 1880 the number of persons who committed suicide amounted to 191,289. Of these, 148,339 were males and 42,950 females. Judged from this standpoint, it would appear that the decidedly weaker sex was the masculine; for it will be seen that in weakness towards self-destruction the males more than treble the females. The explanation given of this fact is that women are in general more resigned to fate, and adapt themselves with much less mental shock, although commonly allowed to be more emotional to adverse circumstances and altered surrounding conditions. They are also more influenced by religious scruples and public opinion; but what is perhaps the greatest restraining influence of any, even in usually sober France, is the fact that they are much less given than males to the abuse of alcoholic drinks. Under the heading of "age," it is remarked that for both sexes suicide attains its maximum of intensity about the sixtieth year of life. The period between forty and fifty seems relatively favourable for males, while for females there are two such periods of quiescence—viz., from twenty to thirty-five, epoch of maturity; and from sixty-five to seventy-five, period of calm and repose. Turning to occupation, the number of suicides for every 100,000 of the population in general being 22, agriculturists, who make up half the total population, furnish a ratio of 14; those engaged in manufactures give the highest ratio, 22; while those engaged in commerce are the least prone to suicide; and after these, strange as it might at first sight appear, the smallest number of suicides is furnished by domestic servants. The liberal professions appear to be the most maltreated, for the number is 46 per 100,000 inhabitants, being surpassed by those without any calling only, who commit suicide at the rate of 92 for every 100,000 of the population. Matrimony, on the whole, acts as a safeguard against a suicidal tendency, for, as compared with celibacy in either sex, the married category has the more favourable return; indeed, where there are children, much more favourable. As regards methods of committing self-effacement, there are seven principal ones, and, as it is here curious to observe the influence of sex in this lugubrious selection, the appended table is worth giving:—

Methods of suicide.	Men.	Women.
Drowning	38·626	18·957
Hanging	63·863	12·783
Shooting	23·198	367
Stabbing	6·180	1·097
Asphyxia by CO	8·299	5·653
Poison	2·457	1·489
Jumping from heights	4·794	2·436

Contrary to what one might expect, a greater number of suicides are committed in summer than in winter, attaining the maximum for both sexes in June and July. With respect to the causes of suicide, a division into seven is also made, and here again, especially under the heading of alcohol and cerebral diseases, sex presents striking contrasts:—

Causes of suicide.	Men.	Women.
Poverty and reverse of fortune	19·827	2·634
Family quarrels	17·514	5·998
Love, jealousy, debauch	7·905	3·719
Drunkenness	15·817	1·135
Diverse troubles	32·113	7·631
Cerebral diseases	37·854	17·552
Suicides after crime	1·115	99

As regards alcohol, however, the table is hardly altogether accurate, for it classes as alcoholics those who are not habitually so, for a man who commits suicide in a state of drunkenness is not necessarily a drunkard; many suicides look to alcohol to supply the blind force necessary for the accomplishment of a dreadful act. It cannot, however, be denied that, even in comparatively sober France, the terrible "rush to alcohol" is becoming more accentuated year by year; so much so that Parliamentary cognisance has been taken of the fact, and legislation is proposed to at least suppress the adulteration of alcoholic drinks which is now so rampant, and to which a large share in the mischief is attributed.

Death of Sir Richard Wallace.

This large-hearted philanthropist has passed away. The poor of Paris, both English and native, have lost in him a generous giver and a true support in urgent need. The instances in life of a man of great wealth and position devoting almost the whole of his time and a large part of his fortune to practical schemes for the amelioration of the hard lot of less fortunate humanity are too rare not to be appreciated at their true value when they do occur. Sir Richard Wallace was undoubtedly one of these instances. Apart from his own individual good works, many are the charities throughout England and France which numbered him amongst their subscribers, and during his time there has been scarcely a public subscription for the relief of

suffering humanity, in whatever part of the world, eve relosed without having his name enlisted for a generous donation. His well-equipped ambulance and unbounded charity during the war, the Siege of Paris, and the Commune will be long remembered. Nor did his well-doing end here. In more than one hospital of Paris the words "Salle Wallace," "Salle Seymour," over the entrance to a ward, bear evidence of his ready giving and endowment. In addition to all this and much more, he constructed and supported entirely at his own cost and charge the Hertford British Hospital for British subjects, which in picturesqueness of design is greatly admired; while in matters of food, clothing, general finding, &c., it is replete almost to lavishness, and is nursed by an efficient staff of English nurses. This was Sir Richard Wallace's pet charity, and it may truly be said that he, for one, did all he could to render it worthy of the purpose for which it was intended—viz., the relief of the sick and maimed English poor in this capital. It was the writer's privilege to have been associated with Sir Richard Wallace in the working of this institution, and he can only wind up this little tribute to his memory by saying, in a word, that a better or kinder man he never met.

Paris, July 21st.

Obituary.

THOMAS JOSEPH BRAMAH, M.A., M.R.C.S. ENG.

(OF BROMPTON.)

COMPARATIVELY few men knew Mr. Bramah in his professional capacity, though his name is on the Medical Register. He was the eldest son of the late Mr. Timothy Bramah, engineer, whose wide acquaintance with the leading engineers and scientific men of the last generation was well reflected in the subject of our notice. He had an excellent knowledge of his profession, but never practised it save for the benefit of the poor, to whom he gave not advice alone, but often medicine too—and both of the very best. He had diligently studied medicine in the school of St. George's and elsewhere, and was a good anatomist and chemist. He was also a sound mathematician and classic. He inherited the mechanical genius of his family, together with all that constitutes high character, being a grandson of the famous Joseph Bramah, to whom we owe improved locks and watercloset, the hydraulic press, and many other inventions of the highest order. As a friend Mr. Bramah was unique and invaluable. The notes of his character were the love of truth, sound judgment, very wide knowledge, unfailing kindness, especially to the poor and the weak, and devout religious views of the Evangelical order. By those who knew him intimately he will not cease to be remembered with affection and regard. His death took place on the 12th inst., at the age of seventy-five.

THOMAS SPRY BYASS, M.D., F.R.C.S. ENG.

ON Sunday, July 13th, there passed away, full of years, at Cuckfield, Sussex, Thomas Spry Byass, who will live long in the hearts and memories of his numerous friends and patients. Born in the year 1807, Dr. Byass received his medical education at Guy's Hospital, and on becoming qualified he settled more than sixty years ago at Cuckfield, where he has lived continuously ever since, he with his father before him being known as inhabitants of the town for nearly a century. For many years Dr. Byass was a most active member of the Court of Assistants of the Apothecaries' Company, and many will remember the genial way in which as Master during the International Medical Congress of 1881 he entertained at the Hall a large number of distinguished guests. From the earliest days of the Volunteer movement he took a lively interest in the work, and until a few years ago he was an acting surgeon-major with Her Majesty's Commission. On the occasion of his having completed fifty years of practice, Dr. Byass was presented by his patients with a handsome silver salver and a purse of five hundred guineas enclosed in an antique silver casket, as well as a beautifully illuminated album. This and the constant attention which his patients showed him during his declining years testified to their affectionate regard. So great was the confidence which his patients had in him that even when they were away from home they could not rest content without seeing him, and it was a common occurrence for him to journey to London and to Brighton on the same day, as well as doing a hard day's work in the country.

Dr. Byass was well known to most of the leading consultants in London, and his sound common sense and ripe experience always stood him in good stead when brought in contact with them. He was a late president of the Brighton and Sussex Medico-Chirurgical Society, and always kept himself well abreast of professional knowledge and progress. His small spare frame was full of restless activity, and he never knew what it was to tire in his work or to cease doing for the welfare of his patients. His death will be severely felt by all grades of society, for he had the conscience and manners of a true gentleman, and he was the tried and trusted friend of the poor, who will miss the liberal hand with which he ministered to their wants and necessities. Until a few months ago he had a fair share of bodily strength, and to the very last he retained his full mental vigour. The funeral took place on Thursday, the 17th inst., and was largely attended. The Ockenden Lodge of Freemasons, of which Dr. Byass was a past master (he was also a past provincial grand officer), were present to do honour to their departed brother, whom they held in high esteem.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed the examinations in the subjects indicated on July 11th:—

Surgery.—A. A. Bartholomew, L.S.A. (1887), Edinburgh University; G. Wilkinson, Cambridge University and Middlesex Hospital; R. R. Hatherell, St. Thomas's Hospital; H. Mason, Queen's College, Birmingham; A. Griffith and F. S. Colton, University College; J. Lupton, Owens College, Victoria University; W. C. Ellis, St. Thomas's Hospital; L. Trewby, London School of Medicine for Women; D. R. P. Evans, Liverpool and Charing-cross Hospital; W. H. Goodson, London Hospital; A. G. Keeling, St. Thomas's Hospital; H. Knevitt, London Hospital; C. A. Lapthorn, Middlesex Hospital; H. A. Vernon and H. Watts, London Hospital.

The following candidates, having previously passed the examination in Medicine, Forensic Medicine, and Midwifery, were granted the diploma of the Society:—

H. Mason, F. S. Colton, and W. C. Ellis.

The following gentlemen passed on July 16th:—

Medicine, Forensic Medicine, and Midwifery.—A. A. Bartholomew, L.S.A. (1887), Edinburgh University; J. G. Wilson, London Hospital; A. Griffith, University College; A. K. A. Caesar, London Hospital; A. H. Creswell, London Hospital; R. W. Cooper, St. Thomas's Hospital; A. A. Grosvenor, Guy's Hospital.

Medicine and Forensic Medicine.—A. M. Van Ingen, L.M.S., Madras University; F. M. Welstead, Guy's Hospital.

Medicine and Midwifery.—G. A. Hickey, St. Vincent's Hospital, Dublin; A. A. Trenow, St. George's Hospital.

Midwifery.—G. W. Chapman, St. Thomas's Hospital; L. J. Minter, King's College.

The following gentlemen, having previously passed the examination in Surgery, were granted the diploma of the Society:—

A. A. Bartholomew, J. G. Wilson, A. Griffith, and A. H. Creswell.

THE FRENCH HOSPITAL.—The recent *fête* at the French Exhibition, in aid of the French Hospital in Shaftesbury-avenue, is stated to have produced £2000. The Parisian publishers, says the *Figaro*, have presented £150 worth of books to the library of the hospital.

WORKMEN'S TENEMENTS IN FLATS.—In view of the organisation of the proposed Manchester and Salford Dwellings Corporation, Limited, with a capital of £250,000, by some gentlemen interested in providing healthy dwellings for the poorer classes, it is intended to raise at once £25,000. The dwellings in contemplation are to be constructed on the most approved sanitary arrangements, and the rents will be from 1s. 6d. to 4s. 6d. per week.

ORAL TEACHING OF THE DEAF AND DUMB.—Lord Granville presided at a meeting held at the Steinway Hall, on Tuesday, of the supporters of this institution, and the Countess of Rosebery, in the presence of a large assembly, distributed the prizes to the successful pupils of the Association. Lord Granville opened the proceedings with a resolution, which was carried, adopting the report for the past year. During the twelve months thirty-four boys and nineteen girls had attended the school. The Training College had received ten students, of whom five—one male and four females—had been awarded first-class certificates. The demand for qualified teachers is in excess of the supply.

CAVENDISH COLLEGE.—The following elections have been made:—Scholarship of £50: Barraclough (Sheffield). Scholarships of £30: Burgess (Oundle); Dove (Merchant Taylors'); Longland (St. Albans); and Senior (Sheffield). Exhibitions: Foweraker (Exeter); Swann and Barrett (King's Lynn).

FOUR AT A BIRTH.—From an Italian correspondent we learn that at None, near Turin, a woman of very slender figure and of low stature has been delivered of four children at one birth, one of them male and three of them females, the last born of whom died shortly after delivery. The male child and his two sisters are in perfect health.

THE ALVARENGA PRIZE of the College of Physicians of Philadelphia, consisting of one year's income of the bequest of the late Señor Alvarenga of Lisbon, has been awarded to Dr. R. W. Philip, of the Victoria Dispensary for Consumption and Diseases of the Chest, Edinburgh, for his essay on Pulmonary Tuberculosis, which will be published by the College.

OPEN SPACES.—At a meeting of the Metropolitan Public Gardens' Association, held on July 8th at 83, Lancaster-gate, a sum of £50 was voted towards the expenses in connexion with the proposed preservation of Bethnal Green Poor's Land, £50 for seats in Vauxhall-park, and £10 to a public gymnasium in Plumstead. Seats, presented by the Association, had been accepted for St. Mary's Churchyard, Aldermanbury, and for King-street, Hammersmith. The Association is now endeavouring to secure spaces situated in Fulham, Clapton, and other parts of the metropolis.

DERBYSHIRE GENERAL INFIRMARY.—The special committee appointed in May last to consider the best measures to be taken respecting the serious defects that have been discovered in the infirmary buildings, met on the 15th inst., and adopted a report, which will be submitted to the governors at the special meeting to be held on the 29th inst. *Inter alia*, the committee recommend (as being the most satisfactory course) the erection of an entirely new hospital on the present site, but to the north or south of the existing building.

LAUNCESTON GENERAL HOSPITAL.—The report of this hospital for 1889, giving particulars regarding its government, condition, and cost, has just been issued. Cases of typhoid have increased, while on the other hand diphtheria has diminished considerably in the district. A site has been chosen for the erection of a reception house for the insane, and also for a new nurses' home, and various improvements of an architectural and sanitary type have been carried out during the year. The Board record the gift of £50 from the Children's Hospital Committee towards furnishing one or two children's wards in the hospital, and the promise of the annual interest on £450 in aid of the same object. The hospital and its management may be looked upon as in a more complete state than at any previous period since it came under the control of the Board. About 54,000 inhabitants of the town and district are directly benefited by this institution, which has now been established for twenty-six years. The whole of the annual maintenance is contributed by the Government, saving what is contributed by patients who pay fees.

ATHLETIC SPORTS.—The following are the results of the second annual contest of the United Hospitals Athletic Club and the Edinburgh University Athletic Club, held at Stamford Bridge on Tuesday last. 100 Yards—B. C. Green, U. H., 1; G. S. S. Marshall, U. H., 2; won by half a yard; time, 10½ sec. Throwing the Hammer—R. E. Fraser, U. H., 94 ft. 8 in., 1. Half Mile—W. Kent Hughes, U. H., 1; A. R. Badger, U. H., 2; won by fifteen yards; time, 2 min. 5¼ sec. Hurdles (120 yards)—B. C. Green, U. H., 1; T. M. Donovan, Edin. Univ., 2; won by half a yard; time, 17 sec. Long Jump—R. G. Hogarth, U. H., and R. Williams, Edin. Univ., tied at 19 ft. 6 in. Mile—C. Wace, U. H., 1; D. S. Duncan, Edin. Univ., 2; won by three yards; time, 4 min. 36⅗ sec. High Jump—P. Pierre, U. H., 5 ft. 8 in., 1. Putting the Weight—W. M'Innes, Edin. Univ., 38 ft. 0½ in., 1. Three Miles—A. Quennell, U. H., 1; H. W. Joyce, Edin. Univ., 2; won easily; time, 16 min. 23⅘ sec. Quarter Mile—B. C. Green, U. H., 1; T. M. Donovan, Edin. Univ., 2; won by three yards; time, 52⅘ sec. It will be noticed that the representatives of Edinburgh University secured but one event outright—namely, putting the weight.

STEWART INSTITUTION FOR IMBECILES.—The following donations have been given to the Building Fund for providing additional accommodation:—Dr. G. Kidd, £100; E. J. Figgis, £105; Lord James Butler, £50; D. Drummond, £50; and James Gardiner, £50.

SWANSEA HOSPITAL.—The 73rd annual report, just issued, calls attention to the munificence of Mrs. Griffith Llewellyn, which had enabled the committee to arrange for the completion of the valuable addition to the existing buildings of a new Eye Hospital, which, it was anticipated, would be ready for occupation in a few weeks. During the past year the in-patients had numbered 863, and the out-patients 2714; 156 operations had been performed, of which 129 were discharged cured, 2 relieved, 14 died, and 11 remained under treatment. The expenditure had been largely in excess of the available income, and had necessitated the withdrawal of £1000 from the deposit account, several heavy accounts still remaining undischarged.

OPENING OF A NEW OPHTHALMIC HOSPITAL IN SOUTHWARK.—On Thursday afternoon his Royal Highness the Prince of Wales, accompanied by the Princess and the Princesses Victoria and Maud of Wales, laid the foundation stone of the new Royal South London Ophthalmic Hospital, St. George's-circus, Southwark. The route was profusely and gaily decorated with flags and streamers. The Duke of Cambridge read an address to the Royal visitors, in which the authorities expressed their sense of the distinguished honour of their Royal Highnesses in consenting to lay the foundation stone of the new building.

BURIAL REFORM.—Bishop Barry presided at the twelfth annual meeting of the Church of England Burial, Funeral, and Mourning Reform Association, held at Sion College, Victoria Embankment, on Wednesday. On the commencement of the proceedings a letter was read from the Prince of Wales approving of the burial reform advocated by the Association. Letters to a similar effect were also read from several bishops and noblemen. It was resolved to memorialise the Government, urging for the concentration in the Local Government Board of the authority over burial places, now divided between that Board and the Home Office, the enforcement of more adequate sanitary precautions, and the provision where needed of well-appointed mortuaries. A donation of £100 to the funds of the Society was announced from the Duke of Westminster.

MEDICAL NOTES IN PARLIAMENT.

Despatch of Business.

IN the House of Lords on Thursday, the 17th inst., the Barracks Bill and the Custody of Children Bill were read a third time and passed, and on Friday, the 18th, the rejection of the Local Government Acts of England and Scotland Repeal Bill was agreed to without debate. The Pauper Lunatics Asylum Bill was read a second time on the motion of Lord De Ros.

The Pharmacy Act (Ireland) Amendment Bill.

This Bill was moved by the Earl of Erne on Monday, the 21st inst. Its object was to provide for the registration of chemists and druggists in Ireland who sold poisons, for the examination of all such persons, and to give them representation on the Pharmaceutical Council.—The Marquis of Waterford proposed that the Bill should be referred to the Standing Committee on General Bills, inasmuch as it provided that all persons who had been breaking the law since 1875 should be registered, and thus recognised, and allowed to continue their trade under the law.—Earl Cadogan said the Bill had received the countenance and support of the Government in the other House, and the Government were still prepared to support its principles. Still, he thought it should be referred to the Standing Committee on General Bills.—The Earl of Erne having agreed to the suggestion, the Bill was accordingly referred.

The Invasion of Pauper Aliens.

In answer to a question on this subject, in the House of Commons, on Thursday, the 17th inst., Sir M. Hicks-Beach said he had no doubt that a great many Englishmen went to foreign countries and successfully competed with native labour there, but he was afraid that it would not be possible to obtain statistics on the subject. The returns of aliens arriving by the 128 ships referred to were not subjected to the same statistical control as was now exercised over such returns, because the ships arrived before the new arrangements were put in force.

Prosecutions under the Irish Pharmacy Act.

On Friday, the 18th inst., Mr. Sexton asked, with reference to a prosecution pending at the suit of the Irish Pharmaceutical Society against chemists and druggists in Belfast, whether any steps could be taken with a view to a postponement of that and any similar cases until the sense of Parliament had been fully ascertained in reference to the Pharmacy (Ireland) Act Amendment Bill, which was passed through the House of Commons and was now before the other House of Parliament.—The Attorney-General for Ireland: The prosecutions referred to in the question were not instituted by my directions, and appear to be at the suit of private prosecutors. I have therefore no power to interfere in the manner suggested in the question.

Housing of the Working Classes Bill.

On Monday this Bill, as amended, was under consideration. Earl Compton asked for an assurance from the Government that the Bill was not to be considered a final measure with regard to the reform so urgently necessary for the proper housing of the working classes. He trusted the Government would do their best to introduce a further Amendment Bill next session.—Mr. Ritchie said that, having taken the matter in hand, he would feel it a great privilege to be able to deal with the whole question. Even if the Bill did nothing but consolidate existing Acts it would be a valuable measure. Complaint had also been made that certain provisions of the Public Health Acts had not been incorporated into this Bill, but this measure dealt with dwellings which were unfit for human habitation, and the provisions of the Public Health Acts would be inapplicable. With regard to the Public Health Acts, however, he might say that he hoped that next session they might be consolidated and amended.—After some discussion Sir Walter Foster and Sir L. Playfair congratulated the right hon. gentleman on the improvement which had been effected in the Bill in committee. Mr. Ritchie suitably replied and the Bill was read a third time.

THE HOUSE OF LORDS' COMMITTEE ON HOSPITALS.

On Monday, the 21st inst., this Committee resumed its inquiry, Lord Sandhurst in the chair.

Miss Mackay, matron in charge of the Throat and Ear Hospital, Golden-square, was previously night sister in the London Hospital, and had obtained her appointment on the recommendation of the matron of the London Hospital. She did not think the London Hospital was sufficiently staffed with efficient nurses. They did their best, but it was rather rough nursing in that respect, and prevented that individual attention which many cases required. She had been importunate on the subject of having more assistance, and she received more on that account than the others did. Many of the nurses were inexperienced, and that made the responsibility of the sisters very much harder. She had the responsibility of 400 beds, that was nine wards. Referring to the children's ward, the witness was quite sure that some of the children were awakened for washing purposes very early in the morning, otherwise it would be impossible to get through the work. In many instances the night staff of the children's wards was too small. She considered the wards underhanded. Many duties of the nurses, such as cleaning and dusting the sister's room, might be left to the ward maids. She did not consider the system of the night-nurses having their food in the wards a good system, but could not see how it was to be altered. The hours were far too long, but could not be altered without a considerable addition to the staff. On the whole she did not think paying probationers were very desirable. They never went on night duty, and seldom stayed long enough to become settled.—The Chairman: Would you be satisfied with the matron going round the wards once a month?—The Witness: I think the visit ought to be more frequent. Her complaints of the food referred not so much to the quantity, but rather to its not being nicely cooked and served. Her opinion as to the overcrowding was that it existed principally in the medical wards, and it was very trying at times. Assistance might be got from the matron, but it generally was at the expense of some other wards. Special nurses were also supplied in the same way. The best probationers were generally taken from the wards to supply the nursing house, and that was detrimental to the work in the ward. She had sent probationers out as private nurses, and, on reporting the fact to the matron, had received her consent.—Lord Cadogan: We have it on evidence that some, at least, of the nurses were warned by their friends against complaining?—The Witness: I think the nurse might by so doing injure her future prospects. In reply to Lord Spencer, the witness thought the responsibility of the complaints was left too much to the "Sister," and the nurses had no sufficient access to the "Matron." In answer to Lord Cathcart, the witness stated that the patients in the London Hospital were very well attended to in spite of the insufficient nursing staff.

Miss Ellen Yatman was recalled, and stated that it was solely on account of her health breaking down that she left the London Hospital, and proceeded to contradict the statements in a letter from Miss Macdonald which had been put in as evidence by Mr. Carr Gomm.

Miss Lückes was again recalled, and stated that the number of nurses at the London Hospital was 242, and there were 750 beds. Lord Kimberley asked several questions, which elicited the fact that over thirty of the nurses were never available for actual duty in the wards, and Miss Lückes was asked to furnish their lordships with a statement in tabular form, showing the number of nurses actually available for duty in the wards both by day and by night, which she agreed to do. In reply to several questions, the witness said she thought that hospital nurses ought to be much better paid than they were. She thought probationers were very fairly paid, except in reference to washing, for which each one, in her opinion, ought to receive half-a-crown a week. She did not agree with the idea of giving private nurses a percentage of their earnings, as she thought an actual increase of salary would give more satisfaction. She would like to see all hospital nurses getting a month's holiday during the year, and the sisters six weeks. The convalescent homes for nurses she did not approve of, inasmuch as the routine of such homes detracted from their value as suitable places for making a holiday. At the present time nurses stayed with ladies in the country, where they had home life, and she thought that was a preferable system. The system of registration of nurses met with her disapproval, and she alleged that friction might arise between the registered nurse and the registered practitioner.—Lord Kimberley: Do you make a profit out of your private nurses?—The Witness: The hospital does.—Lord Cathcart suggested that it would be better for the matron to keep her register as an official book, and to have a private record of her own for her remarks about the nurses.

Mr. William John Nixon, the house governor of the London Hospital, was next examined. He stated that he had been connected with the hospital for forty-four years, and that his salary was £880 per annum, with a furnished house. He gave a history of his connexion with the hospital, and recounted his duties as house governor, which post he had held for the last fifteen years. He was the universal referee for the hospital. The matron was nominally responsible to him, but in practice she was entirely independent of him. He had nothing to do with cases of dismissal; they went directly before the House Committee, and it was to them that the matron was responsible. The witness explained the principle on which the expenditure was carried out and his mode of calculating the cost of in-patients and out-patients. He did not think that the interest on the capital ought to enter into the calculation in his system of keeping accounts. He thought it would be more interesting, but questioned whether it would be more correct. Replying to Lord Cadogan, the witness stated that the money spent in sanitary repairs would appear in a separate account, and the interest of such expenditure would not enter into the calculation of the cost per bed. He was not responsible for the balance sheet, the drawing up of which was the province of the Secretary and the Committee of Accounts. What Lord Thring called the capital account they called the extraordinary expenditure, but it was his province to determine whether any particular item should be placed in the current account or in the capital account. In answer to the Chairman, he approved of a uniform system of keeping accounts for all hospitals. The witness then went into detail of the income and expenditure of the hospital, and the Committee adjourned the further examination of the witness until Thursday.

On Thursday, Mr. G. Q. Roberts was recalled, and gave evidence on the question of expenditure. The house governor was responsible for some of the vouchers, and some one of the members of the House Committee for others. The books of the hospital were audited in a systematic manner. The tradesmen's bills, which are paid on their quarterly account, were submitted to a committee of accounts elected by the governors at a meeting held in December. The collector received 5 per cent. commission for collecting old subscriptions and donations, and 10 per cent. for the new ones. It was his opinion that frequent appeals to the public did not answer so well in increasing the funds as did occasional special appeals. The witness stated that the medical school was managed apart from the hospital. The private nursing institution brought into the hospital £1207 per annum of net profit.—The Chairman: How do you know that it is net profit?—The Witness: We have a balance-sheet each year. A special minute to this effect was passed recently by the House Committee.—Lord Thring: The House Committee is responsible for the whole of the petty cash, and yet they never examine the accounts regularly?—The Witness: The accounts are submitted to the committee each week.—Lord Thring: Quite true, but they do not always examine them?—The Witness: They do not examine them regularly, but I suppose the House Committee is perfectly satisfied. The auditor is responsible for the accounts. He goes through them, but he has never made any disallowances to my knowledge. None of the house governor's accounts have ever been disallowed. As regards the treasurer, he was in no respect accountable for the expenditure.—Lord Cathcart referred to the item of £14,842 (equal to about one-third of the total expenditure), paid as salaries, as being enormous.—Lord Cadogan asked by whom this system of keeping accounts was devised, and the witness said that he was in no way responsible for the system adopted by the authorities.—The Chairman: As a practical man, would you like to see any amendment of the forms of accounts?—The Witness: I think it would be simpler if they had the whole of the accounts in one office.—The Chairman: Do you think the balance-sheet would be more intelligible?—The Witness: No, I do not think it could be improved, because it is the result of various suggestions which I have made.

Mr. John Henry Buxton, the treasurer of the London Hospital, was called and examined. Lord Spencer asked whether he thought the accounts were made sufficiently clear for the public as well as for the hospital.—The witness thought they were extremely clear. In reply to the Chairman the witness said that he had been very anxious to have the senior medical men on the committee, but his desire had been firmly opposed. He did not, however, think it was a matter of great importance, because the members of the staff were frequently called in to give their advice to the Committtee. He would like very much to see some controlling power in regard to new hospitals, and hoped that some day there would be a system of inspection without any interference. He would be very sorry to bring the hospitals on to the rates.—The Chairman: I do not much see the use of an inspecting officer if he is not to interfere.—The Witness: He might report to the House Committee as to the inefficiency or efficiency of the hospitals.—Lord Spencer: Do you employ men on your staff who have diplomas of Dublin or Edinburgh?—The Witness: Our senior staff must be Fellows of the Royal College of Surgeons.—Lord Spencer: It is rather a close staff, if we may say so, and not open to the ablest men in Edinburgh or Dublin?—The Witness: No surgeoncy is open to any man unless he is a Fellow of the Royal College of Surgeons.—Lord Spencer: May you not be excluding some of the ablest men in the kingdom by this exclusion?—The Witness: I should prefer that that question be put to a medical man. My own opinion is that it is quite open enough.—Lord Kimberley: Does it not occur to you that the medical profession in London are exactly the body that could not give us an unbiased answer?—The Witness: It might be so.—Lord Kimberley: May the rule not have been framed, not so much to secure efficiency as to secure appointments for those who have been educated in London?—The Witness: I would hardly believe such a thing.

William John Nixon was recalled and further examined. He was of opinion that there had been no very serious illness among the nursing staff arising from the insanitary condition of the hospital. He gave an account of the method of inquiry into the condition of the out-patients coming into the London Hospital, and submitted a summary of the work undertaken in that department. The system of out-patient inspection in existence at the London Hospital cost about £150 or £160 per annum, and had been extremely beneficial to the hospital. He did not think any increase of the staff in that direction necessary, and thought it would be wise if other hospitals adopted a similar system.—Lord Cathcart asked a series of questions regarding the employment of male nurses in cases of delirium, and the witness said he very much preferred the female nurses. Regarding the question of overcrowding, the witness admitted that this had occurred in former times, and explained the steps that had been taken to prevent it since, and gave an account of the origin of the Grocers' Ward. The witness was severely pressed by Lord Kimberley on the point as to whether it would not be possible to limit the reception of patients suffering from ordinary ailments, so as to provide room for the reception of the more urgent cases.—Lord Cadogan: We have elicited that you admit that the hospital is sometimes overcrowded, and, secondly, that it is impossible to prevent it.—The Witness: Yes, but the overcrowding does not exist throughout the whole hospital; and, secondly, it is impossible to prevent it in places. When it occurred, they had only to take the best means in their power to get rid of it.

The Committee then adjourned.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on July 22nd, 1890.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever	Other diseases.	Total.	
Eastern Hospital	279	36	..	21	1	337	442
North-Western Hospital	248	40	..	2	..	290	415
Western ,,	133	11	..	6	3	153	262
South-Western ,,	130	..	..	..	1	131	340
South-Eastern ,,	180	15	4	13	4	216	462
Northern ,,	376	21	..	5	..	402	480
Totals	1346	123	4	47	9	1529	2401

BOOKS ETC. RECEIVED.

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On Perinæorrhaphy by Flap-splitting. By Fancourt Barnes, M.D., M.R.C.P. Second Edition. 1890. pp. 22.

CHRONICLE BOOK AND JOB PRINTING OFFICE, Orange, New Jersey.
Transactions of the National Eclectic Medical Association of the United States of America for the years 1889-90. Edited by Alex. Wilder, M.D., Secretary. Vol. XVII. 1890. pp. 316.

HIRSCHFELD, BROS., Fetter-lane, London.
Abortion and its Treatment, from the Standpoint of Practical Experience. By T. Gaillard Thomas, M.D. From Notes by P. B. Porter, M.D. Revised by the Author. 1890. pp. 112.

HIRSCHWALD, A., Berlin.
Uber die Functionen der Grosshirnrinde: gesammelte Mittheilungen mit Anmerkungen. Von Hermann Munk. Zweite vermehrte Auflage. 1890. pp. 320.

KEGAN PAUL, TRENCH, & CO., Ludgate-hill, London.
Domestic Sanitary Drainage and Plumbing: Lectures on Practical Sanitation. By W. R. Maguire. 1890. pp. 437.

LAMERTIN, HENRI, Bruxelles.
Diagnostic des Tumeurs du Ventre. Par le Docteur Léon Gallez. 1890. pp. 573.

LEWIS, H. K., Gower-street, London.
Contributions to Surgery and Medicine: Fractures, Dislocations, Deformities, and Diseases of the Lower Extremities. By Hugh O. Thomas. 1890. Part 7, May, 1890. pp. 320.
Lymph-stasis, or Retardation of Lymph, as an Element in the Causation of Disease, especially in regard to Scrofula and Tuberculosis. By Wayland C. Chaffey, M.D.Lond. (Graduation Thesis, with Appendix). 1890. pp. 73.

LIPPINCOTT COMPANY, Philadelphia.
Transactions of the American Pediatric Society. First Session, Washington, D.C., Sept. 20th; Baltimore, M.D., Sept. 21st, 1890. Edited by W. Perry Watson, A.M., M.D. Vol. I. 1890. pp. 5.

LONGMANS, GREEN, & CO., London.
Principles of General Organic Chemistry. By Professor E. Hjelt. Translated by J. Bishop Tingle, Ph.D., F.C.S. 1890. pp. 220. Price 6s. 6d.

MASSON, G., Paris.
Les Anæsthésiques Physiologie et Applications Chirurgicales. Par A. Dastre. 1890. pp. 306.
Leçons Cliniques sur les Maladies de l'Appareil Locomoteur (Os, Articulations, Muscles). Par le Dr. Kirmisson. 1890. pp. 550.

SMITH, ELDER, & CO., Waterloo-place, London.
The Natural History and Relations of Pneumonia; its Causes, Forms, and Treatment. A Clinical Study. By Octavius Sturges, M.D. Cantab., F.R.C.P.; and S. Coupland, M.D. Lond., F.R.C.P. Second Edition. 1890. pp. 447.
The Milroy Lectures for 1890. The Causes and Prevention of Phthisis. By Arthur Ransome, M.D., M.A., F.R.S. 1890. pp. 146.

SPON, E. & F. N., 125, Strand, London.
The Turkish Bath, its design and construction; with chapters on the adaptation of the Bath to the private house, the Institution, and the Training Stable. By Robert O. Allsop, Architect. Illustrated with Plans. 1890. pp. 152.

SWAN SONNENSCHEIN & CO., Paternoster-square, London.
New Life; its Genesis and Culture. A Book for Young Mothers. By H. C. O'Neill and Edith A. Barnett. 1890. pp. 206.

THOMLINSON, JOHN, Stanley Works, Partick; also MENZIES, J., & CO., Edinburgh.
A New Theory of Chloroform Syncope, showing how the Anæsthetic ought to be administered. By Robert Kirk, M.D. Edin. 1890. pp. 58.

WILLIAMS & NORGATE, Henrietta-street, Covent-garden, London.
The Philosophy of Tumour Disease. A Research for Principles of its Treatment. By C. Pitfield Mitchell. 1890. pp. 263.

WOOD, WM., & CO., New York.
A Treatise on Orthopædic Surgery. By Edwd. H. Bradford, M.D., and R. W. Lovett, M.D. Illustrated with 789 Wood Engravings. 1890. pp. 782.

The Journal of Mental Science; edited by D. Hack Tuke, M.D., and Geo. H. Savage, M.D.; July, 1890 (J. & A. Churchill, London, 1890); price 3s. 6d.—Wilson's Useful Handy Books: Income Tax, and how to get it refunded; by Alfred Chapman, Esq.; seventh edition; price 1s.—Inhabited House Duty: How and when to appeal; by Alfred Chapman, Esq.; third edition; price 1s. (Effingham Wilson & Co., London).—Bridges; by J. W. Rundall, B.A. Cantab. (R. & R. Clark, Edinburgh, 1890).—The Journal of Anatomy and Physiology, Normal and Pathological; conducted by G. M. Humphry, M.D., Sir Wm. Turner, M.B., LL.D., and J. G. M'Kendrick, M.D.; Vol. XXIV.; New Series, Vol. IV., Part 4, July, 1890; with plates and woodcuts (Williams and Norgate, London, 1890).—The Cell Theory, Past and Present: being the Inaugural Address delivered November, 1889, to the Scottish Microscopical Society, by Sir Wm. Turner, Knt., M.B. (Williams & Norgate, London, 1890); price 1s. 6d.—The Practitioner, a Journal of Therapeutics and Public Health; edited by T. L. Brunton, M.D., D. Macalister, M.D., and J. M. Bruce, M.D.; No. 265 (Vol. XLV., No. 1), July, 1890 (Macmillan & Co., London); price 1s. 6d.—Giornale della Società Fiorentina d'Igiene, Anno V., Nos. 7-12, 1889 (G. Civelli, Firenze).—The Verulam Review, July-September, 1890 (Elliot Stock, London); price 1s.—The Journal of the Royal Agricultural Society of England, Third Series, Vol. I., Part 2, No. 11, June 30th, 1890, to be continued quarterly (John Murray, London); price 3s. 6d.—The Journal of Comparative Pathology and Therapeutics; edited by J. McFadyean, M.B., B.Sc.; Vol. III., Part 2, June, 1890; quarterly (W. and A. K. Johnston, Edinburgh and London); price 2s. 6d.—L'Omphalotome, un nouvel Instrument pour la Pratique des Accouchements; par J. H. Keiffer (H. Vaillant-Garmanne, Liége, 1890).—The Bristol Medico-Chirurgical Journal, edited by J. Greig Smith, M.A., F.R.S.E., assisted by L. M. Griffiths; Vol. VIII., No. 28, June, 1890 (J. W. Arrowsmith, Bristol; J. & A. Churchill, London); price 1s. 6d.—Therapeutisches Lexikon für Praktische Aerzte; herausgegeben von Dr. Anton Bum; 5-8 Lieferungen (Urban und Schwarzenberg, Wien und Leipzig, 1890).—The American Journal of the Medical Sciences; published monthly; edited by J. Minis Hays, A.M., M.D.; Vol. C., No. 1, July, 1890, No. 219 (Lea Brothers & Co., Philadelphia, 1890).—Brain: a Journal of Neurology, edited for the Neurological Society of London by A. De Watteville; Part 50, Summer Number, 1890 (Macmillan & Co., London); price 3s. 6d.—The Great Eastern Railway Company's Tourist Guide to the Continent; edited by Percy Lindley; illustrated; new edition (published for the Great Eastern Railway Company, at 125, Fleet-street, London); price 6d.—Walks in the Ardennes, Cycling, Driving, Boating, by Rail and on Foot; edited by Percy Lindley; new edition (published at 125, Fleet-street, London); price 6d.—Identité de la Dengue et de la Grippe-Influenza; par le Dr. Jules Rouvier (J. Lechevalier, Paris).—Ovariotomia ejecutada con Feliz Exito; por el Dr. M. M. Ponte (Emprenta de "La Patria," Caracas, 1890).—Etude sur la Croissance et son Rôle en Pathologie; par le Dr. Maurice Springer (Felix-Alcan, Paris, 1890).—Kemp & Co.'s Complete Guide to Health, for India and the Tropics (Kemp & Co., Pharmaceutical Chemists, Bombay; London Office, 1, Whittington Avenue, E.C., 1890).—Archives of Surgery; by Jonathan Hutchinson, LL.D., F.R.S. Vol. II., No. 5, July, 1890 (J. & A. Churchill, London); price 2s. 6d.—The Liverpool Medico-Chirurgical Journal, including the Proceedings of the Liverpool Medical Institution, No. 19, July, 1890 (Medical Institution, Liverpool, and H. K. Lewis, London); price 3s. 6d.—Leprosy in Hong Kong; by James Cantile, M.B., F.R.C.S. (Kelly & Walsh, Hong Kong, 1890).—Papers on the Pure Oral Instruction of the Deaf and Dumb; by Wm. Van Praagh (11, Fitzroy-square, London, W.); price 2s.—Defective Articulation resulting from Cleft Palate; by W. Van Praagh (Harrison and Sons, London).—Recherches sur les Maladies Vénériennes à Paris; par Dr. B. Commenge (G. Masson, Paris, 1890).—Index-Medicus: Authors and Subjects, Vol. XII., No. 6, June, 1890 (Trübner & Co., and Lewis, London).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMS, GERALD W., L.R.C.P.Lond., M.R.C.S., has been appointed House Surgeon to the Stockport Infirmary.

BENNETT, C. J., M.R.C.S., has been appointed Medical Officer to the Hayfield Rural Sanitary Authority.

BENSON, T., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Tanfield District of the Lanchester Union.

BRODERICK, H. E., M.D. Durh., M.R.C.S., has been appointed Medical Officer for the Borrowly District of the Northallerton Union.

BYRNES, JOHN J., L.K.Q.C.P.Irel., has been appointed Medical Officer of the Bource District of the Kilmallock Union.

CAIGER, FRED. F., M.D., M.B.Lond., has been appointed Medical Superintendent of the South-Western Hospital, Metropolitan Asylum District.

CHEVES, JAS. T., M.R.C.S., has been reappointed Medical Officer and Public Vaccinator for the Sixth District of the Liskeard Union.

COOK, R. HALDANE, M.B. Aberd., has been appointed House Surgeon to the Royal Infirmary, Perth, vice W. Robertson, M.B.

COPEMAN, S. MONCKTON, M.A., M.D. Cantab., F.C.S., Demonstrator of Physiology at St. Thomas's Hospital, has been appointed Research Scholar of the British Medical Association.

DAVEY, R. S., M.D. St. And., M.R.C.S., has been reappointed Medical Officer for Walmer, of the Dover Union.

DIXON, WALTER, M.B., C.M. Edin., has been reappointed Medical Officer for the Second Division Hougham District of the Dover Union.

DRAGE, LOVELL, M.B. & B.S., M.R.C.S., has been appointed Public Vaccinator for the Second District of the Hatfield Union, vice C. Drage, resigned.

FLEMING, THOMAS, M.B., C.M. Glasg., has been appointed Medical Officer for the Ireby District of the Wigton Union.

FULLER, COURTENAY J., M.R.C.S., L.R.C.P., has been appointed Senior Resident Medical Officer to the Miller Hospital and Royal Kent Dispensary, vice E. Williams Marshall.

GORDON, COLIN, M.B., C.M. Edin., has been appointed Assistant House Surgeon to the General Hospital, Birmingham.

GRANT, FREDK., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for Market Harborough.

HILL, A. B., M.D. Giessen, L.R.C.P., L.R.C.S. Edin., has been appointed to the new post of Lecturer on Public Health in the Queen's College, Birmingham. Also reappointed Public Analyst for Warwick County.

HILL, BOSTOCK, M.D., D.P.H., has been appointed Lecturer on Public Health to the Queen's College, Birmingham.

HOLLAND, HENRY F., M.D. St. And., M.R.C.S., has been appointed Medical Officer for the Ampthill Rural District of the Ampthill Union.

JACKSON, DONALD, M.D. Glasg., L.F.P.S. Glasg., has been reappointed Medical Officer for the Hexham Union District.

JONES, JOHN, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of the Aberffraw District of the Holyhead Union, vice H. P. Jones, resigned.

LUNAN, C. S., M.B., L.R.C.S. Edin., has been appointed Parochial Medical Officer of Blairgowrie, vice R. Lunan.

MURSELL, HENRY TEMPLE, M.B., C.M. Edin., late Junior House Surgeon, has been appointed Senior House Surgeon to the Ancoats Hospital, Manchester, vice W. Fletcher Boycott, M.B., C.M. Edin., resigned.

OPENSHAW, THOS. HORROCKS, M.B., M.S., F.R.C.S., has been appointed Senior Demonstrator of Anatomy to the London Hospital Medical College.

PHILLIPS, L. W. R., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 1 District of the Steyning Union.

ROBINS, GEO. N., L.R.C.P. Edin., M.R.C.S., has been appointed Assistant Medical Officer for the No. 4 District of the St. George's Union, Pimlico.

SAUNDERS, W., F.R.C.S. Eng. & L.S.A. Lond., has been appointed Medical Officer to the Wellingborough and District Medical Institute, vice Dr. F. E. Adams.

SIBLEY, WALTER K., M.B., B.C., B.A. Cantab., has been appointed Assistant Physician to the North-West London Hospital, vice Dr. A. P. Luff, resigned.

SIMCOCK, JAMES, M.B., B.Ch. Vict., has been appointed Junior House Surgeon to the Ancoats Hospital, Manchester, vice H. T. Mursell, M.B., C.M. Edin., appointed Senior House Surgeon.

STAWELL, J. C. L., M.B. Dub., L.R.C.S. Irel., has been appointed Medical Officer to the Bagenelstown Fever Hospital, county Carlow.

SUNDERLAND, OLIVER, L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Bexley Union District of the Dartford Union.

TATE, GEO. TEMPLE, M.B., C.M., has been appointed Junior Resident Medical Officer to the Miller Hospital and Royal Kent Dispensary, vice Courtenay J. Fuller.

TATE, WALTER W. H., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer to University College Hospital.

THOMPSON, CHAS. S., M.B., C.M. Edin., has been appointed Medical Officer for the Abbotshaw District of the Bideford Union.

TOMSON, D., M.D., C.M. Glasg., has been reappointed Medical Officer for the Leagrave District of the Luton Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-square, S.W.—Visiting Surgeon to the Western District. Must reside in the district.

COUNTIES OF CAITHNESS AND SUTHERLAND.—Medical Officer of Health for the above counties. Salary £400, with £100 for travelling and other expenses, except forms and official stationery and postages. (Apply to Mr. J. Brims, County Clerk, Thurso.)

COUNTY COUNCIL OF ROSS AND CROMARTY.—Medical Officer of Health for the county, under the Local Government (Scotland) Act, 1889. Salary £300, with actual travelling outlays and an allowance of 15s. for each night he is necessarily engaged from home. (Apply to Mr. Duncan, County Clerk, County Buildings, Dingwall.)

DUDLEY DISPENSARY.—Resident Medical Officer. Salary £130, with increase at the end of twelve months if service satisfactory. Good house (furnished, except beds and bed and house linen), coal, gas, and water found, and all rates and taxes paid.

GLOUCESTER FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant Medical Officer, out-door. Salary £120. (Apply, President, Grey Friars House, Gloucester.)

KENT COUNTY ASYLUM, Barming-heath, Maidstone.—Fourth Assistant Medical Officer. Salary £150 a year, with furnished quarters, attendance, coal, gas, washing, garden produce, and milk.

MANCHESTER ROYAL EYE HOSPITAL.—House Surgeon. Salary £70 per annum, with residence, board, and washing.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer at the Convalescent Hospital at Cheadle for twelve months. Salary £150 per annum, with board and residence.

ST PANCRAS, London.—District Medical Officer for Wards 1 and 2. Salary £120 per annum, rising £10 yearly to £140. (Apply to Mr. Millward, Clerk to the Guardians, Vestry Hall, Pancras-road, N.W.)

Births, Marriages, and Deaths.

BIRTHS.

BAKER.—On July 15th, at The Cedars, Tenterden, Kent, the wife of Charles Eaton Baker, M.R.C.S., of a son.

BASSETT.—On June 20th, at Steytlerville, Cape Colony, the wife of Henry Thurstan Bassett, M.B. Lond., of a daughter.

BROWN.—On July 18th, at Spondon, Derby, the wife of Robert Major Brown, M.A., M.B. Cantab., of a daughter.

BURD.—On July 11th, at Shrewsbury, the wife of E. Lycett Burd, M.D. Cantab., of a daughter.

BUXTON.—On July 21st, the wife of A. St. Clair Buxton, F.R.C.S., of The Grove, W., and Seymour-street, Connaught-square, W., of a daughter.

COPELAND.—On July 15th, at Philbeach-gardens, Earl's-court, the wife of W. H. Lawrence Copeland, M.B., of a son.

HARLOCK.—On July 20th, at Singleton, Sussex, the wife of Harry Harlock, L.R.C.P. Lond., M.R.C.S., of a son.

LANGRIDGE.—On July 8th, at St. John's Cottage, Duxford, Cambs., the wife of A. H. Langridge, M.R.C.S.E., L.R.C.P. Ed., of a son.

LEWIS.—On July 20th, at 453, Brixton-road, S.W., the wife of T. Preston Lewis, M.D., of a son.

MAC DONALD.—On July 20th, at the Dorset County Asylum, the wife of P. W. Mac Donald, M.D., Medical Superintendent, of a daughter.

MALPAS.—On July 17th, at Sunnyside, Bickley, Kent, the wife of Douglas D. Malpas, M.D., of a son.

WATHEN.—On July 15th, at York-place, Clifton, Bristol, the wife of John Hancock Wathen, L.R.C.P.E., of a son.

WHITCOMBE.—On July 21st, at Earl's-court-road, South Kensington, the wife of P. Percival Whitcombe, M.B. Lond., of a son.

MARRIAGES.

EDWARDS—WAYMAN.—On July 22nd, at Park Congregational Church, Halifax, by the Rev. J. R. Bailey, Henry James Edwards, L.R.C.P. & S. Ed., of Banbury, Oxon., to Alice Mary, youngest daughter of Thomas Wayman, M.P., of Savile Close, Halifax.

ENSER—HARRIES.—On July 15th, at the Parish Church, Tenby, Henry C. Enser, M.R.C.S., L.S.A., 34, Charles-street, Cardiff, to May, youngest daughter of the late W. M. Harries, of Castle-square, Tenby. No cards.

FARAKER—HOBMAN.—On July 17th, at the Parish Church of Emmanuel, Paddington, William Gregeen Faraker, Surgeon, of Peel, Isle of Man, to Mary Ann, eldest daughter of the late Alfred Thomas Hobman, of New Cross, S.E.

HAILES—TAYLOR.—On July 23rd, at Christ Church, Weston-super-Mare, by the Rev. Fredk. Smith, M.A. Oxon., brother-in-law of the bride, assisted by the Rev. A. M. Foster, Clements Hailes, M.D. Edin., eldest son of Major-Gen. Hailes, R.A., to Edith, youngest daughter of Thomas Taylor, B.A. Oxon., M.D. Lond.

HENDLEY—STOWARD.—On June 4th, at Cooch Behar, John Lupton Hendley, Civil Surgeon, of Cooch Behar, son of Surgeon-General Hendley, C.B., to Clara Louisa, daughter of Thomas Stoward, Esq.

KEATINGE—POUCHER.—On July 14th, at Venice, Henry Pottinger Keatinge, M.B., fourth son of Lt.-General R. H. Keatinge, V.C., C.S.I., to Janie Denslow, only daughter of the Honourable W. A. Poucher, of Oswego, New York, U.S.A.

MCCALL—GILCHRIST.—On July 23rd, at 3, Kirklee-gardens, Kelvinside, Glasgow, by the Rev. Professor Charteris, D.D., Edinburgh University, one of Her Majesty's Chaplains, Anthony McCall, M.B., C.M., Kilnhurst, Yorkshire, to Mary Greer, only child of the late James Gilchrist, Jun., and stepdaughter of Professor M. Charteris, M.D., Glasgow University.

MOORE—GRAINGER.—On July 17th, at Killiney Church, Brigade Surgeon Sandford Moore, late Army Medical Staff, and of the Inner Temple, to Elizabeth Annie, youngest daughter of the late David Grainger, Dalriada, county Antrim.

SMELT—WALLS.—On July 17th, at the Parish Church, Wilcot, by the Rev. M. A. Smelt, of Cheltenham, late Rector of Medstead, assisted by the Hon. and Rev. Bertrand Plydell Bouverie, Rector of Pewsey, Charles Allen Casterton Smelt, M.B., C.M., youngest son of the Rev. Henry Smelt, Vicar of Wilcot, to Mary Monteith, only surviving daughter of the late William Beveridge Walls, of Calcutta and Edinburgh.

WILSON—LOXTON.—On July 22nd, at Cannock Parish Church, by the Rev. C. N. Bolton, M.A., Thomas Wilson, M.D. Lond., of Cannock, to Annie Gordon, only daughter of Samuel Loxton, Ferndell, Cannock.

DEATHS.

DAVIDSON.—On June 26th, at Pretoria, Transvaal, James Henry Davidson, M.B., C.M. Edin., aged 31.

MACMUNN.—On July 21st, suddenly, at High-street, Long Eaton, John MacMunn, M.D., M.B. Aberd.

SCOTT.—On the 22nd inst., at Chandos-street, Cavendish-square, John Scott, M.D., aged 73.

SCOTT.—On the 22nd inst., at Langshaw House, Moffat, N.B., John Scott, M.D. (late of Demerara), aged 79.

TURNELL.—On July 14th, at Cornwallis-terrace, Hastings (late of Cambridge), Arthur Turnell, M.R.C.S., L.S.A., youngest son of the late William Turnell, The Lodge, Brixworth, Northampton.

TURNER.—On May 15th last, at Paris, after a few days' illness, William Arthur Turner, L.D.S.R.C.S. Eng., late of the firm of Carter Bros. and Turner, Park-square, Leeds, aged 32.

WARN.—On July 17th, at Highgate-road, Reuben Thomas Warn, Surgeon, aged 53.

WESSELS.—On June 13th, at Pretoria, Transvaal, Daniel Wessels, M.B., B.S., B.A. Cantab., aged 25.

WOOD.—On July 17th, at Weymouth-street, W., William James Wood, M.R.C.S.E., of Brightwalton, Wantage, Berks, in his 57th year.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 24th, 1890.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia tion Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
July 18	29·85	N.W.	59	57	111	71	57	1·67	Cloudy
,, 19	29·80	N.	59	58	105	64	57	·67	Cloudy
,, 20	30·24	N.	59	56	111	70	50	..	Cloudy
,, 21	30·22	N.W.	60	58	106	72	54	..	Cloudy
,, 22	30·09	N.W.	66	62	123	78	59	..	Cloudy
,, 23	30·19	W.	64	59	119	78	58	..	Cloudy
,, 24	29·97	W.	65	60	129	75	60	..	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

ADVERTISING PRACTITIONERS.

ASTONISHED members of the profession send us specimens of the touting method every week, from which we can only make selections. The appended card is in many respects unique.

> Surgery, 169, Borrett-road, Penrose-street, Walworth.—Advice Gratis. Doctor in attendance, 10 A.M. to 1; 3 to 4; 7 to 9, and Sunday morning, 12 to 1. Medicine 6d. Medicine for one week, 1s. Medicine and Visit, 1s. 6d.; ditto, one week, 3s. Vaccination. Teeth Extracted. Midwifery (attended by the doctor) from 10s. 6d. N.B.—Affections of Lungs and Heart, Diseases of Women and Children, receive Special Attention. Pills, Powders, Ointments, Liniments, Eye Lotions, Hair Washes, Senna, Castor Oil, Cod Liver Oil, &c. &c., obtainable.

Here is another most objectionable specimen:—

> Nervous Debility—Its Cure.—The *Medical Review* says: "Sufferers from nervous and urinary complaints (so disastrously treated by quacks) receive bona-fide treatment at the Dispensary, on Canalbridge, City-road, London, E.C." Physician, Dr. D. Fisher, L.R.C.P., L.S.A., &c., attends 11 to 12, and 7 to 9. Sundays, 11 to 12 only. Fee from 1s. Advice by letter, 2s. 6d. Separate waiting-room for private cases.

We can only hope that the various bodies will note such methods, and use their disciplinary powers to correct them.

In Doubt.—We do not see that medical practitioners can in such a case do anything but acquiesce in the will of the patient, with all courtesy and respect for each other.

Mr. Vaughan.—We are not aware of the existence of any evidence that the ingestion of tomatoes favours the development of cancer.

Sir James Murray and Son.—A notice of the preparation appeared in our issue of July 12th.

INTERFERENCE OF MEDICAL OFFICERS OF HEALTH.

To the Editors of THE LANCET.

SIRS,—Would you consider the action of a medical officer of health as unprofessional, and consequently ungentlemanly, if he examined a case that had been reported to him by a medical practitioner in his neighbourhood as typhoid fever, under the Infectious Diseases (Notification) Act of 1889, without intimating to the practitioner or obtaining his consent, and afterwards telling the mother that it was not a case of typhoid, but a case of something else?—Yours faithfully,

July 14th, 1890. A COUNTRY PRACTITIONER.

*** It is no part of the duty of a medical officer of health to sit in judgment on, or to check, the diagnosis of the practitioner who notifies a case of infectious disease. To see a case so notified, and to contradict the diagnosis of the medical practitioner without communication with him, is altogether unjustifiable and irregular, and would justify complaint to the Local Government Board, if not to the General Medical Council.—ED. L.

RELATIONSHIP OF PLEURISY TO TUBERCULOSIS.

As a result of an extended study of the after history of cases of pleurisy, and of the association of tubercular lesions with pleural adhesions, Dr. A. A. Smith of Bellevue Hospital Medical College, New York, arrived at the following conclusions, which he placed before the meeting of the Association of American Physicians (*Medical News*, July 5th).

> 1. If it be true that the very large majority of cases of pleuritis not traceable to ordinarily recognised causes are tubercular, there is no clinical method by which the fact can be proven, and the assumption that they are tubercular can only be by inference.—2. If such a large majority of pleurisies are, as many seem to believe, of tubercular origin, recovery from tuberculosis of the pleura is much more frequent than from pulmonary tuberculosis.—3. The prognosis in purulent pleural exudate is more favourable as to the subsequent development of tuberculosis than in sero-fibrinous exudate.—4. That even though at a necropsy evidences of pleuritis, recent or old, may be found, it does not necessarily follow that the pleuritis is tubercular because there are tubercular lesions in the lung.—5. It is fair to assume, from the frequent association, post mortem, of recent and old changes in the pleura with pulmonary tuberculosis, that many of these changes are tubercular in origin, although at the time of death tubercles are not found in the pleura.—6. In cases of pleuritis, although evidences of tuberculosis exist in the lungs, as shown by physical signs and by the presence of tubercle bacilli in the sputa, it does not necessarily follow that such cases of pleuritis are tubercular in origin, although they probably are.—7. In cases in which pulmonary tuberculosis develops subsequently to a pleuritis, there is probably the same underlying cause for each.

Mr. R. Durdin.—Urban Pritchard (Lewis's Practical Series); Hartman, translated by James Erskine; Politzer's Text-book, translated by Dr. Cassells; Hinton (1874); Burkner's Atlas of Diseases of the Membrana Tympani (see THE LANCET, vol. ii. 1890, p. 129); Kirchner (1885), Ohren-Heilkunde.

Mr. W. E. Porter.—Whilst we sympathise with our correspondent, we feel that it would be inexpedient to continue in THE LANCET a controversy which has been hitherto proceeding in another medical journal.

Thomas should consult a qualified medical practitioner. We do not give advice.

"HÆMATURIA AND GARDEN RHUBARB."

To the Editors of THE LANCET.

SIRS,—In a glass cell before me is a little oxalate calculus, one-third of an inch long by one-sixth of an inch broad; and it is pleasant to me to examine his mulberry face, with here and there a cruelly sharp angle, through my two-inch objective now and then, and to think what might have been. This is his history. Fifteen years ago, after feasting day by day, and almost meal by meal, on garden rhubarb, of which I was exceedingly fond, I felt a little out of sorts, and went for a short holiday to the North. My principal trouble was slight feverishness, with depression of spirits and a craving for stimulants, which are both unusual with me. While attending morning service in church, I experienced almost suddenly a feeling of faintness, with rigor, cold sweat, and pain in the loin, and in the afternoon vomiting and slight hæmaturia, the urine being rose-coloured only. I at once knew there was stone in the kidney, and was aware of the moment it passed into the bladder, about twenty-four hours, I think, after the first symptoms. Febrile excitement, pain, and insomnia, but no dysuria, continued for some days, when I heard my little enemy rattle into the chamber vessel during micturition. I have never eaten rhubarb since, and always caution my male patients against its use, and never before or since have I been troubled with like symptoms. The glass sarcophagus which contains my treasure bears the following inscription: "Calculus oxalate, formed by excessive use of rhubarb as article of diet, and passed spontaneously June, 1875." And never was a truer epitaph penned. So, you see, I have something to show for my rather painful experience.

I am, Sirs, very truly yours,

July 21st, 1890. T. E. A

"PERSISTENT DANDRUFF."

To the Editors of THE LANCET.

SIRS,—I beg to suggest to "M.D." for persistent dandruff &c. a plan of treatment I noticed as being very successful in Vienna—namely, ℞ Resorcini, ol. olivarum, ætheris sulph., ℥iii. *aa*; spt. vini rect., ℥viss. To be well shaken, and applied to the scalp by a bristle brush about twice as large as the ordinary mucilage brush, by insinuating it between the locks of hair. The head to be well washed with soap and warm water twice a week.—I am, Sirs, yours truly,

GEORGE C. STEPHEN, L.R.C.P. Lond.

Sutherland-avenue, W., July 18th, 1890.

A PROPOSED LARGE HOSPITAL EXPENDITURE.

THE *Evening News* quotes the *Charity Record* as complaining that its reporters were refused admission to a meeting at the "Hospital for Gentlemen's Servants," where the expenditure of £65,000 was to be discussed, and draws conclusions from such refusal unfavourable to the policy of the administrators of the hospital.

Milton.—Our correspondent would no doubt obtain all the information he desires from Albert Napper, Esq., of Guildford, the originator o cottage hospitals.

THE R. H. S. CARPENTER MEMORIAL FUND.

To the Editors of THE LANCET.

SIRS,—It is expected that there will be a large gathering of members of the British Medical Association at the meeting to be held at Birmingham during the next week. I am certain there are many practitioners who would willingly contribute to the above fund were its objects but plainly stated to them. I would therefore appeal to any who were personally acquainted with the deceased and his work, and who purpose attending the meeting, to kindly put the case before the attention of their friends, with the request that they will show their sympathetic appreciation by subscribing freely to the fund. It will be observed that I have received £43 5*s.* I sincerely trust that the committee will receive sufficient to permit of a clear £100 being handed over to the daughters, after deducting the necessary cost of the proposed memorial stone we earnestly desire may be erected. The following is the present list of subscribers.—I am, Sirs, yours faithfully,

JOHN PAGE HENTSCH, M.R.C.S.,
Hon. Sec. to the Committee.

201, Southampton-street, Camberwell, S.E., July, 1890.

The Proprietors of THE LANCET	..	..	£5	5	0	Mr. Campbell Boyd ..	£1	1	0
Mr. Lawson Tait ..	..	..	5	5	0	Dr. Chaple	1	1	0
Croydon Medical Reading Society ..	..	..	3	3	0	Dr. Abraham Cohen ..	1	1	0
Mr. Sera ..	..	..	3	3	0	Dr. Alex. Grant	1	1	0
Dr. Lionel Beale ..	..	..	2	2	0	Mr. Albert Kisch	1	1	0
Dr. Geo. Brown ..	..	..	2	2	0	Mr. Joseph Loane	1	1	0
Dr. J. G. Glover ..	..	..	2	2	0	*Medical Press & Circular*	1	1	0
Mr. Nelson Hardy ..	..	..	2	2	0	Mr. Weddell Thomas ..	1	1	0
Dr. Paramore ..	..	..	2	2	0	Dr. Hugh Woods	1	1	0
Mr. T. Richardson ..	..	..	2	2	0	Dr. John Brown	0	10	6
Mr. H. Adams ..	..	..	1	1	0	Mr. Albert Smith	0	10	6
Mr. Noel Bell ..	..	..	1	1	0	Mr. John Marshall	0	10	0
						Mr. C. G. Woodd	0	10	0
						A Friend in Durham ..	0	5	0

Mr. F. C. Bridle.—The remedy in our correspondent's case would probably be an action to recover the money paid, but he should consult a solicitor and put all the facts before him. We do not know of any society to help him, unless the Charity Organisation Society will take up the case.

Query.—It would depend, we presume, on the positive regulations, if any, and the action of the members of the various boards.

Mr. W. A. Loxton.—The announcement was made in THE LANCET of the 12th inst.

CHRONIC "BILIOUS ATTACKS."

To the Editors of THE LANCET.

SIRS,—I should feel much obliged if you would insert in your valuable journal the following short account of a case, to see if any of your readers can give me any hints as to treatment.

A lady aged twenty-three suffers dreadfully from bilious attacks, which have resisted all kinds of treatment. The attack comes on by sleeping rather heavily overnight, and awaking in the morning with hemicrania, gradually increasing until noon, when it reaches a climax and vomiting sets in, to be followed by retching for some time after the stomach has been emptied. She has to go to bed about noon, and takes no food at all that day. After a fairly good night's rest she awakes the next morning feeling quite well. It is a common occurrence for only one clear day to intervene between the attacks, but there are usually about two a week. The patient has suffered in this way for over twelve months, and has lost a stone and a half in weight. I have tried medicines, strict dieting, and out-door exercise, at present without any benefit. I may mention that the patient has consulted three other medical men besides myself.—I am, Sirs, yours faithfully,

July 14th, 1890. A TEN YEARS' SUBSCRIBER.

THE DANAHER FUND.

Amount already acknowledged	£26	5	6
H. C. T.	1	1	0
Lennox Browne, Esq. (per Mr. Hutchinson) ..	2	2	0
Total	£29	8	6
Less, advanced by Treasurer	10	0	0
Balance in hand	£19	8	6

We understand the fund is still open for further subscriptions, which will be received by the treasurer, Mr. Edward East, 16, Upper Berkeley-street, W.

N. Y. Z.—Our correspondent seems to have very just and serious ground of complaint, and he ought to have redress in a legal way. We doubt whether his way of recouping himself would be the right or the legal way. The second and third of his questions are strictly questions for a lawyer, on which our opinion can have no weight. Even the first question we could not answer satisfactorily without hearing the other side. But we repeat that, on the face of the statement made, he seems to have just and serious ground of complaint. We advise him to consult his lawyer.

R. W. C.—A surgeon in actual practice is undoubtedly privileged, but he should at the proper time take care that his name is taken off the Jury Lists. If he fails to do so, his privilege will not greatly help him.

L.R.C.S.—The qualifications mentioned, though full, do not give the title of physician, or warrant its use.

SIMPLE METHOD OF PRODUCING LOCAL ANÆSTHESIA.

ACCORDING to Dr. Voituriez, writing in the *Moniteur Thérapeutique*, local anæsthesia can be very easily produced by the simple, almost ever ready, means of causing two or three syphons of seltzer water to discharge their contents successively on the surface to be operated on. The anæsthesia, which is due, of course, to the carbonic acid contained in the seltzer water, lasts for about five minutes and then disappears.

S. de F.—Holders of the M.B. degree have no legal right to the title of "Dr.," but are often styled so by courtesy.

PHYSICAL EXERCISES FOR CHILDREN.

To the Editors of THE LANCET.

SIRS,—I rejoice to see the excellent suggestions to promote physical exercise amongst children. The benefit must be very great, but probably the greatest difficulty will be to find or provide suitable swimming-baths. Permit me, therefore, to call attention to a large bath which is well adapted for Whitechapel district and East London generally. It is at the Working Lads' Institute, Whitechapel, in the main road, opposite the London Hospital. It is about sixty feet in length by thirty-two feet, and the depth of water can be regulated. Adjoining the bath is a good public playground with gymnastic apparatus, so that other physical exercise might be combined, to the great delight and advantage of the children brought. At the present time five girls' schools are taught swimming regularly one day a week, when they have the exclusive use of the bath for two hours. I regret that the state of the Institute's funds will not permit the committee to offer the use of the bath free, but they will gladly assist the movement by arranging for board and other schools at specially reduced terms, and in any other way they can.—I am, Sirs, yours faithfully,

Bow-lane, E.C., July 17th, 1890. HENRY HILL, Hon. Sec.

A CAUTION.

To the Editors of THE LANCET.

SIRS,—A man calling himself Dr. J. G. Davies is going about doing locum tenens work. Under the belief that he was a qualified and registered medical practitioner—a statement which he made, and which I have in writing from him, and in support of which he showed me several excellent testimonials—I engaged him to act as my locum for a fortnight. My suspicions being aroused, I made inquiries of the registrar of the General Medical Council, and I have since heard from him that no one of the name of J. G. Davies is on the Medical Register. Might I ask you to publish this letter, as it may prevent some hard-worked medical practitioner being taken in?—Yours truly,

Mile-end-road, E., July 3rd, 1890. W. F. GRANT, M.D.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir P. Magnus; Prof. Humphry, Cambridge; Mr. Hackett; Messrs. Condy and Mitchell, London; Dr. Angel Money, London; Messrs. Lawrence Bros., Weston-super-Mare; Dr. O'Neill, Lincoln; Messrs. Maclehose and Son, Glasgow; Mr. L. Q. Roberts, London; Messrs. Fenwick and Chinery, London; Mr. Howard Marsh, London; Messrs. Lee and Martin, Birmingham; Dr. Hamilton, Glasgow; Mr. B. Thornton, Margate; Dr. Mott, London; Mr. J. Stewart, Clifton; Mr. Hensley, Bakewell; Mr. Duncan, Dingwall; Mr. Sell, London; Mr. Denman, Beaconsfield; Mr. Mather, Manchester; Mr. E. East; Dr. J. Roche, Kingston; Dr. T. W. Jenkins, Whifflet; Mr. T. B. Young, Halesowen; Dr. Herschel, London; Mr. Bridle; Dr. C. E. Saunders, Hayward's Heath; Mr. G. Foy, Dublin; Mr. H. Hill, London; Messrs. Dakin Bros., London; Captain Ommanney, London; Messrs. Oppenheimer Bros., London; Dr. J. M. H. Munro, Salisbury; Messrs. G. Street and Co., London; Mr. Branthwaite, Worcester; Messrs. Brooks, Peel, and Co., London; Mr. Brudenell Carter, London; Messrs. Carnrick and Co., Bloomsbury; Dr. Notter, Southampton; Messrs. Hopkinson and Co., Notts; Dr. Broom, Glasgow; Mr. J. T. Dodd; Mr. Adams Frost, London; Mr. V. Horsley; Mr. G. C. Stephen; Messrs. Grogan and Boyd, Piccadilly; Mr. Manning, Bournemouth; Dr. McLean, San Francisco; Mr. Ensor, Cardiff; Mr. Scott, London; Messrs. Bailey and Son, London; Dr. Delacroix, Paris; Dr. Menzies, Brighton; Dr. M. Greenwood, London; Mr. Freer, Llandudno; Mr. Birchall, Liverpool; Mr. Symons, Dumfries; Miss Moorhouse, London; Miss Waters, Chester; Mr. Burgess, Manchester; Mr. Dickson, Iver; Mr. Goodall, Wakefield; Miss Gertrude, Sidmouth; Messrs. Cooper and Co., South Kensington; Dr. Johansen, Warnemünde; Messrs. W. H. Smith and Son, Manchester; Mr. H. W. Allingham, London; Messrs. Back and Co., London; Mr. W. A. Lane, London; Mr. J. Busted; Dr. Sims Woodhead, Botham; Dr. Carslaw, Helensburgh; Messrs. Maple and Co., London; Mr. Bellamy; Mr. E. Baily, Oban; Messrs. Blewitt and Reynolds, Birmingham; Mr. E. A. Piggott, Clare; Messrs. Keith and Co., Edinburgh; Mr. Saundby, Birmingham; Mr. Towers-Smith, London; Dr. Beatson, Glasgow; Mr. Flather, Cambridge; Dr. J. L. Kerr, Aberdeen; M. Vandeveld, Paris; Mr. Harrison, Pelsall; Mr. J. Thomas, Cardiff; Mr. Storr, London; Dr. W. T. Law; Mr. Solomon Smith, Halifax; Mr. A. Watson, Huddersfield; Mr. Hornibrook; Rev. A. B., Hounslow; A. C. P., Grantham; Secretary, Manchester Royal Infirmary; M. D. S., London; R. W. C.; Veritas, London; In

Doubt; J. P., London; L.R.C.S.; T. E. A.; Secretary, University of Glasgow; J. T. H., Stamford-hill; Milton; Alpha, Leeds; Deep Blue Sea; Thankful; Secretary, Dudley Dispensary; The United States Patent Office, Washington; Lady Superintendent, School of Massage, London.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Taylor, Norwich; Mr. Price, Carmarthen; Mr. Tully, Hastings; Mr. Truman, Addiscombe; Dr. Moore, Hants; Mr. Dorroll, Suffolk; Dr. Lambert, Bradford; Dr. Lewis, Brixton; Mr. Stitt, Wigtown; Mr. Holdsworth, Leamington; Mr. Taylor, Sheffield; Mr. Hague, London; Mr. Tyte, Minchinhampton; Miss Mainwaring, Margate; Mr. Jeaffreson, Suffolk; Mr. Brown, Carnforth; Mr. Thin, Edinburgh; Mr. Cropley, Northampton; Mr. Fleming, St. Leonard's-on-Sea; Mr. Thompson, Lincoln; Mr. Lawson, Wantage; Mr. Dixey, Falmouth; Mr. Bagot, Manchester; Dr. Long, Salisbury; Mr. Ayerst, Cambs; Messrs. E. and S. Livingston, Edinburgh; Mr. Whitley, Ireland; Messrs. Blondeau et Cie., London; Mr. Faby, Channel Islands; Mr. Nicholls, Bury St. Edmunds; Rev. Dr. James; Mr. Gibbs, Hastings; Dr. Adam, West Malling; Dr. Kesteven, Dorking; Mr. Hensley, Cheshire; Dr. Wilson, Cannock; Dr. Stanley, Sheffield; Dr. Riordan, Walsall; Mr. Bassett, Birmingham; Mr. Williams, Bristol; Mr. Smith, Tredegar; Dr. Gray, Sheffield; Mr. Edwards, Halifax; Mr. Langridge, Cambs; Dr. Davies, Bridgend; Mr. Heywood, Manchester; Mr. Branthwaite, Rickmansworth; Mr. Cousins, Monmouth; Mr. Richardson, Kelso; Mr. Neede, Kentish-town; Dr. McLean, Walthamstow; Messrs. Parry-Jones and Roberts, Wrexham; Dr. Williams, co. Antrim; Mr. Norton, Upper Holloway; Mr. Morgan, Stoke-on-Trent; Mr. Lupton, Stratford-on-Avon; Dr. Fausset, Tamworth; Dr. Johnson, Newport; Mr. Shield, London; Mr. Cochrane, Wigtown; Mr. Drumond, Glasgow; G. G., Anerley; A. B., Anerley; X. Y. Z., London; K. Z., London; High Shot House, Twickenham; Alpha, Cheshire; Jeyes' Sanitary Compound Co., London; Student, London; J. P., London; Secretary, Western General Dispensary, Marylebone; Box, Pelsall; Secretary, Bradford Infirmary; E. P. G., Todmorton; Locum, Bayswater; City of London Lunatic Asylum, Dartford; Locum, London; Successful, London; The Clerk, Swindon; Alpha, Hackney; X. V., London; Medicus, West Hartlepool; A. A., London; D. V., London; Matron, Kidderminster Infirmary; H. W. G., Worcester; E. F. G., London; J. C. W., Pontypridd; Unqualified, London; R., Leeds; Hon. Sec., Nurses' Institute, Southampton; Medicus, Sheffield; A. B. M., London; Veritas, Suffolk; Medicus, London; Country, London; H. F., London; T. E. S., London; Rex, London; Medicus, Walsall; Secretary, Bristol Eye Hospital; Wentworth, London; G. C. J., London; Medicus, Stoke Newington; M.D., London; F. C. J., Manchester; The Clerk, Town Hall, Hull; C., London; E., London; Regent's-park, London; A. P., London; M. K., London; Rus, Chelsea; M.R.C.S., London; T. H., Manchester; Medicus, Peckham; A. B. S., London; Medicus, Margate; Sigma, London.

NEWSPAPERS.—*South Africa, Municipal Review, The Author, Life, The Schoolmaster, Newcastle Weekly Courant, Birmingham Post, Dover Standard, Manchester Guardian, Yorkshire Post, Hampshire Advertiser, North Wales Chronicle, Scotsman, Eastern Post (Whitechapel), Cork Examiner, Evening Post and News, Somerset County Herald, Western Morning News, Devon Weekly Times, Edinburgh Evening Dispatch, Nottingham Daily Express, Worcester Herald, Charity Record and Philanthropic News, Midland Weekly News, City Press, Sunday Times, South Wales Daily News, Scottish Leader, Builder, Worcestershire Echo, Broad Arrow, West Middlesex Standard, Pharmaceutical Journal, Law Journal, Kilkenny Journal, New York Herald (London), Lincolnshire Chronicle, Nature, Chemist and Druggist, Spectator, Sheffield Daily Telegraph, Guy's Hospital Gazette, Architect, Metropolitan, Hertfordshire Mercury, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, Reading Mercury, Windsor and Eton Express, John Bull, Mining Journal, Surrey Advertiser, Saturday Review, Leeds Mercury, St. James's Gazette, Bristol Mercury, West Middlesex Advertiser, Lincoln Gazette, Suffolk Free Press, Whitehall Review, Rochdale Observer, Huddersfield Weekly News, Oban Times, Wrexham Advertiser, Poole Herald, Rangoon Times, Northampton Herald, Southern Times, Carnarvon Herald, Watford Observer, &c.*, have been received.

Medical Diary for the ensuing Week.

Monday, July 28.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

Tuesday, July 29.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

Wednesday, July 30.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, July 31.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

Friday, August 1.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, August 2.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

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